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EPIDEMIC INFLUENZA.

PREVALENCE IN THE UNITED STATES.

Reports from State health officers for the week ended January 25, 1919, indicate that the number of reported cases of influenza decreased generally throughout the country as compared with the preceding week. (See p. 193.)

Alabama, Illinois, New Jersey, and Virginia reported slight increases in the number of cases, but the following-named States reported fewer cases than during the preceding week: Arkansas, California, Connecticut, Florida, Indiana, Iowa, Kansas, Louisiana, Maine, North Carolina, Ohio, Oregon, Vermont, and Washington.

Reports from the zones surrounding Army camps also show a slight general decrease in the number of cases of influenza reported. (See p. 198.)

A Comparison of the Mortality Rates by Weeks During the Influenza Epidemic of 1889-90 and During the Primary Stage of the Influenza Epidemic of 1918 in 12 Cities in the United States.

A partial comparison of the influenza epidemic of 1889–90 with the present epidemic with respect to mortality may be made from statistics of the former epidemic in certain cities as given in a treatise by Dr. Samuel W. Abbott, late secretary of the Massachusetts State Board of Health,[1] and from preliminary statistics for the same cities as published by the Bureau of the Census in its Weekly Health Index.

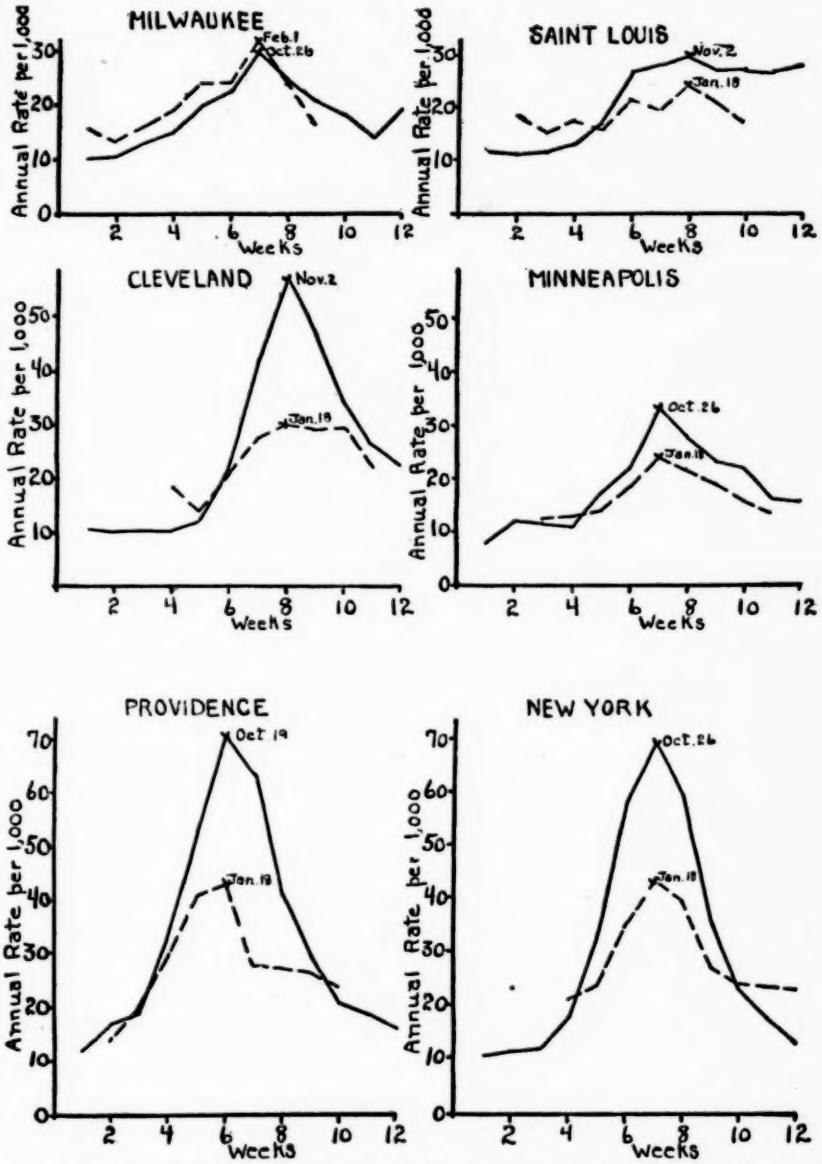
In the paper cited above, Dr. Abbott gives statistics of deaths from all causes and from "respiratory diseases." The Bureau of the Census' Weekly Health Index gives deaths from all causes and from influenza and pneumonia (all forms). Since deaths from respiratory diseases are not directly comparable with deaths from influenza and pneumonia, comparison of the mortality during the two epidemics must be based on deaths from all causes. It appears, moreover, from comparing mortality from all causes with mortality

[1] Abbott, Samuel W., M. D., secretary of the Board (of Health of Massachusetts): The Influenza Epidemic of 1889-90. Twenty-first Annual Report of the State Board of Health of Massachusetts (Public Doc. No. 34), 1890, pp. 307-384.

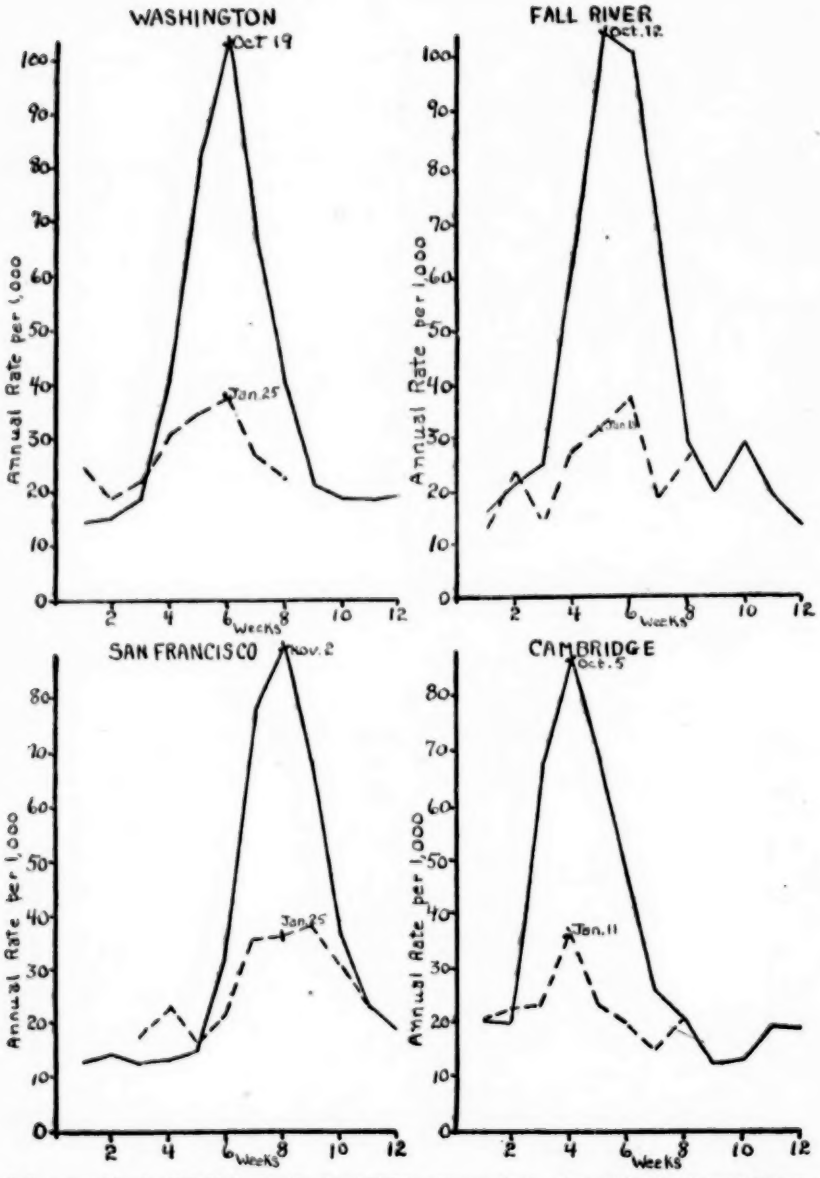
from respiratory diseases during the 1889–90 epidemic, that the mortality from all causes affords a very true picture of the mortality rates as affected by the epidemic. The same may be said of mortality from all causes during the primary stage of the epidemic of 1918 when it is compared with mortality from influenza and pneumonia. The annual mortality rate by weeks from all causes has been employed, therefore, as the basis for the comparison that is presented here.

It will doubtless be realized that the rates for the two epidemic periods are not as comparable as might be desired. The statistics for 1889–90 are probably less complete than those for 1918, for the reason that the reporting and recording of deaths is more accurately and completely done now than 30 years ago. The base line for the epidemic of 1889–90 is higher than that of 1918 because of a higher normal or usual death rate, and, unfortunately, sufficient data are not immediately available for correcting this difference statistically. The statistics of the 1918 epidemic are not strictly comparable with those of the 1889–90 epidemic for the reason that only the primary stage or wave of the 1918 epidemic is represented and mortality during the recrudescences that have occurred, and that may occur, is not brought into consideration. For these and probably other reasons, the statistics can not be utilized with any great degree of refinement and are useful in affording only a very general comparison of the two epidemics.

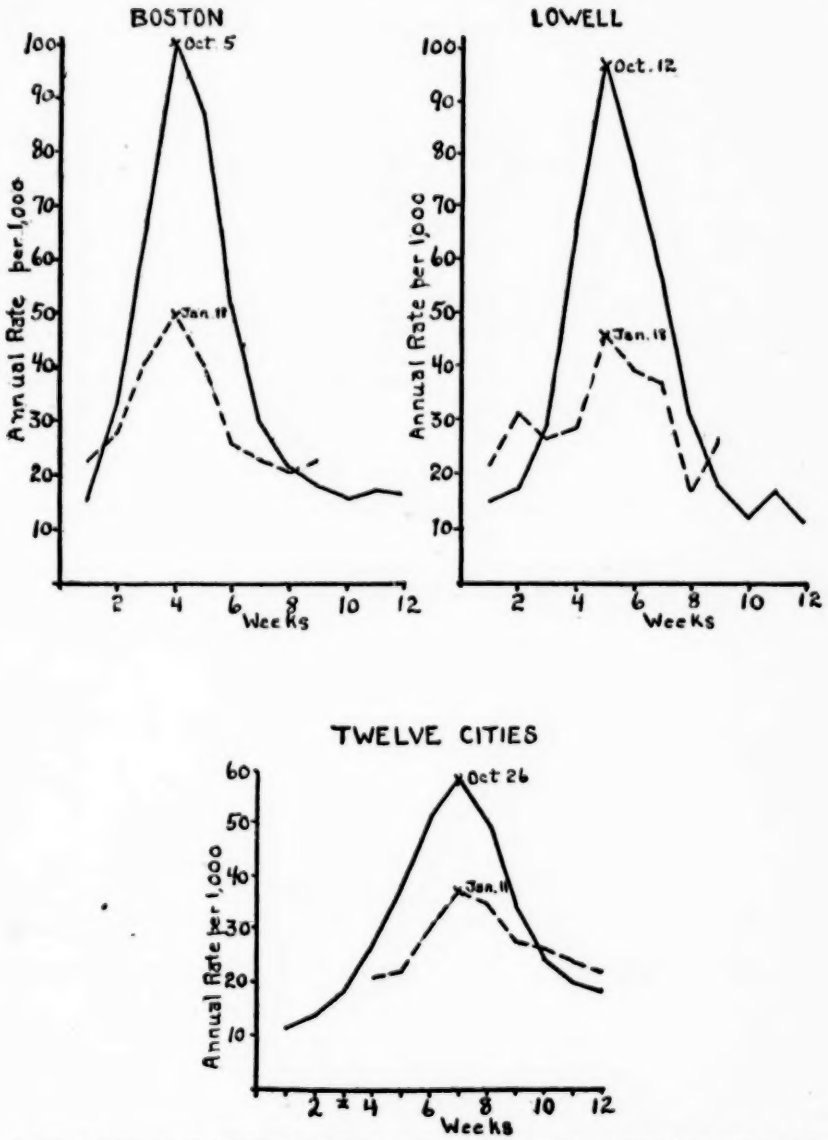
In Tables I and II are shown the annual mortality rate from all causes by weeks for the periods December 15, 1889–February 15, 1890, and September 8–November 30, 1918. In Table III the same figures are presented, but according to a different arrangement: In order to compare the course of the two epidemics, the "peak" weeks (or weeks in which the highest mortality occurred) in the two epidemics are placed together. It was found that this method afforded a fairly clear basis for comparison except in two instances—San Francisco and Fall River—where the curves were fitted together instead. In figure 1 the mortality rates as arranged in Table III have been plotted for each of the 12 cities and for the 12 cities as a single population group, the same scale being used for all of the graphs.



Influenza epidemics 1889-90 (broken line) and 1918 (continuous line). Annual death rate per 1,000 population from all causes, by weeks.



Influenza epidemics 1889-90 (broken line) and 1918 (continuous line). Annual death rate per 1,000 population from all causes, by weeks.



Influenza epidemics 1889-90 (broken line) and 1918 (continuous line). Annual death rate per 1,000 population from all causes, by weeks.

Table I.—Influenza Epidemic of 1889-90.

Annual death rate per 1,000 population from all causes, by weeks, during the period Dec. 15, 1889, to Feb. 15, 1890, compared for 12 cities.[1]

City.	Annual death rate per 1,000 from all causes for the week ending—								
	Dec. 21.	Dec. 28.	Jan. 4.	Jan. 11.	Jan. 18.	Jan. 25.	Feb. 1.	Feb. 8.	Feb. 15.
Milwaukee	15.0	13.2	15.6	18.3	23.7	23.2	30.6	23.2	16.0
St. Louis	17.5	14.6	17.3	15.0	20.1	18.9	23.2	19.9	15.9
Cleveland	18.3	14.0	20.1	26.9	29.7	28.7	28.7	21.9	.....
Minneapolis	12.0	12.4	13.6	18.0	23.5	21.5	18.7	15.5	13.3
Providence	13.8	18.9	28.4	39.8	41.8	27.2	27.2	25.7	22.8
New York	20.7	22.3	34.7	42.5	36.1	27.1	23.9	23.5	22.7
Washington	24.0	18.3	21.5	29.8	33.9	36.4	25.8	21.7	.....
Fall River	12.6	22.4	13.4	26.6	30.9	35.8	18.3	25.9	.....
San Francisco	17.1	22.4	16.4	21.6	34.7	35.0	37.3	30.0	23.0
Cambridge	19.4	22.3	22.3	35.7	23.1	19.4	14.9	20.1	.....
Boston	22.4	27.0	40.5	48.3	40.1	24.9	22.3	19.7	22.3
Lowell	21.5	30.9	26.2	28.2	45.6	38.9	36.9	17.4	26.8
12 cities	19.5	21.2	29.1	35.4	33.6	27.0	25.1	22.7	[2] 21.3

[1] The statistics for deaths are from the Twenty-first Annual Report of the Board of Health of Massachusetts (loc. cit.), pp. 880-381, and the rates are computed upon the basis of the census population of 1890. Where no figures appear for any week the data are not available.

[2] For eight cities.

Table II.—Influenza Epidemic of 1918.

Annual death rate per 1,000 population from all causes, by weeks, during the period Sept. 8 to Nov. 30, 1918, compared for 12 cities.[1]

City.	Annual death rate per 1,000 from all causes for the week ending—											
	Sept. 14.	Sept. 21.	Sept. 28.	Oct. 5.	Oct. 12.	Oct. 19.	Oct. 26.	Nov. 2.	Nov. 9.	Nov. 16.	Nov. 23.	Nov. 30.
Milwaukee	9.4	10.4	12.3	13.8	19.3	22.4	29.1	23.9	20.9	17.8	14.3	19.3
St. Louis	11.4	10.8	11.7	12.4	15.7	25.4	27.4	28.5	26.3	26.6	25.3	27.4
Cleveland	10.2	9.5	10.1	10.1	12.1	21.4	40.7	56.0	46.2	33.4	25.6	22.1
Minneapolis	7.6	11.9	11.9	11.4	17.0	21.6	32.2	27.6	22.8	21.9	15.9	15.1
Providence	11.3	16.6	18.0	31.5	51.7	68.9	61.7	39.8	26.3	20.0	18.4	15.6
New York	11.1	11.5	12.1	17.9	33.1	56.6	67.6	58.2	35.7	22.8	17.9	15.7
Washington	14.0	14.4	18.5	39.7	79.7	100.5	65.6	39.2	20.9	18.3	18.0	18.5
Fall River	15.4	20.3	24.4	60.2	101.6	98.0	62.6	28.0	19.1	28.0	19.1	14.2
San Francisco	12.7	14.1	12.7	13.2	14.4	31.3	75.9	87.6	67.2	36.0	23.0	18.4
Cambridge	19.7	19.2	65.5	85.2	68.0	46.8	24.8	19.6	12.6	13.1	18.7	18.7
Boston	14.5	32.6	65.8	98.0	85.4	50.6	29.0	21.2	17.5	15.3	17.1	16.0
Lowell	14.8	17.2	28.7	65.4	94.1	76.5	55.9	30.1	17.7	12.4	17.2	11.5
12 cities	11.5	13.6	17.5	25.6	36.3	49.4	55.6	49.0	33.2	23.3	19.1	17.5

[1] The statistics for deaths are from the Weekly Health Index, issued by the Bureau of the Census, and the rates are computed upon the basis of the Bureau of the Census population estimates as of July 1, 1918.

Table III.—Influenza Epidemics of 1889-90 and 1918.

Annual death rate per 1,000 population from all causes, by weeks, compared for 12 cities, the rates being arranged with respect to the week of highest mortality in each epidemic (see Fig. I).[1]

City.	Year.	Week of highest mortality during the epidemic (week ending)—	Annual death rate from all causes, by weeks.															
			Weeks prior to week of highest mortality during the epidemic.							Week of highest mortality during the epidemic.	Weeks subsequent to week of highest mortality during the epidemic.							
			Seventh.	Sixth.	Fifth.	Fourth.	Third.	Second.	First.		First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.
Milwaukee	1889-90	Feb. 1	.....	15.0	13.2	15.6	18.3	23.7	23.2	30.6	23.2	16.0	.....	.....	.....	.....	.....	.....
	1918	Oct. 26	.....	9.4	10.4	12.3	13.8	19.3	22.4	29.1	23.9	20.5	17.8	14.3	19.3	.....	.....	.....
St. Louis	1889-90	Feb. 1	.....	17.5	14.6	17.3	15.0	20.1	18.9	23.2	19.9	15.9	.....	.....	.....	.....	.....	.....
	1918	Nov. 2	11.4	10.8	11.7	12.4	15.7	25.4	27.4	28.5	26.3	26.6	25.3	27.4	.....	.....	.....	.....
Cleveland	1889-90	Jan. 18	.....	.....	.....	18.3	14.0	20.1	26.9	29.7	28.7	28.7	21.9	.....	.....	.....	.....	.....
	1918	Nov. 2	10.2	9.5	10.1	10.1	12.1	21.4	40.7	56.0	46.2	33.4	25.6	22.1	.....	.....	.....	.....
Minneapolis	1889-90	Jan. 18	.....	.....	.....	12.0	12.4	13.6	18.0	23.5	21.5	18.7	15.5	13.3	.....	.....	.....	.....
	1918	Oct. 26	.....	7.6	11.9	11.9	11.4	17.0	21.6	32.2	27.6	22.8	21.9	15.9	15.1	.....	.....	.....
Providence	1889-90	Jan. 18	.....	.....	.....	13.8	18.9	28.4	39.8	41.8	27.2	27.2	25.7	22.8	.....	.....	.....	.....
	1918	Oct. 19	.....	.....	11.3	16.6	18.0	31.5	51.7	68.9	61.7	39.8	26.3	20.0	18.4	15.6	.....	.....
New York	1889-90	Jan. 11	.....	.....	.....	.....	20.7	22.3	34.7	42.5	36.1	27.1	23.9	23.5	22.7	.....	.....	.....
	1918	Oct. 26	.....	11.1	11.5	12.1	17.9	33.1	56.6	67.6	58.2	35.7	22.8	17.9	15.7	.....	.....	.....
Washington	1889-90	Jan. 25	.....	.....	24.0	18.3	21.5	29.8	33.9	36.4	25.8	21.7	.....	.....	.....	.....	.....	.....
	1918	Oct. 19	.....	.....	14.0	14.4	18.5	39.7	79.7	100.5	65.6	39.2	20.9	18.3	18.0	18.5	.....	.....
Fall River	1889-90	Jan. 18	.....	.....	.....	12.6	22.4	13.4	26.6	30.9	35.8	18.3	25.9	.....	.....	.....	.....	.....
	1918	Oct. 12	.....	.....	.....	15.4	20.3	24.4	60.2	101.6	98.0	62.8	28.0	19.1	28.0	19.1	14.2	.....
San Francisco	1889-90	Jan. 25	.....	.....	17.1	22.4	16.4	21.6	34.7	35.0	37.3	30.0	23.0	.....	.....	.....	.....	.....
	1918	Nov. 2	12.7	14.1	12.7	13.2	14.4	31.3	75.9	87.6	67.2	36.0	23.0	18.4	.....	.....	.....	.....
Cambridge	1889-90	Jan. 11	.....	.....	.....	.....	19.4	22.3	22.3	35.7	23.1	19.4	14.9	20.1	.....	.....	.....	.....
	1918	Oct. 5	.....	.....	.....	.....	19.7	19.2	65.5	83.2	68.0	46.8	24.8	19.6	12.6	13.1	18.7	18.7
Boston	1889-90	Jan. 11	.....	.....	.....	.....	22.4	27.0	40.5	48.3	40.1	24.9	22.3	19.7	22.3	.....	.....	.....
	1918	Oct. 5	.....	.....	.....	.....	14.5	32.6	65.8	98.0	85.4	50.6	29.0	21.2	17.5	15.3	17.1	16.0
Lowell	1889-90	Jan. 18	.....	.....	.....	21.5	30.9	26.2	28.2	45.6	38.9	36.9	17.4	26.8	.....	.....	.....	.....
	1918	Oct. 12	.....	.....	.....	14.8	17.2	28.7	65.4	94.1	76.5	55.9	30.1	17.7	12.4	17.2	11.5	.....
12 cities	1889-90	Jan. 11	.....	.....	.....	.....	19.5	21.2	29.1	35.4	33.6	27.0	25.1	22.7	21.3	.....	.....	.....
	1918	Oct. 26	.....	11.5	13.6	17.5	25.6	36.3	49.4	55.6	49.0	33.2	23.3	19.1	17.5	.....	.....	.....

[1] See footnotes on Tables I and II.

These statistics, although obviously not as complete as may be desired, indicate that:

1. The mortality rate rose to a much higher point during the primary wave of the 1918 epidemic than in the epidemic of 1889–90 in 9 of the 12 cities. It is of interest to note that the rate was relatively low during both epidemic periods in St. Louis, Milwaukee, and Minneapolis. If the mortality during the 8 weeks of highest mortality be compared for the two epidemic periods in the twelve cities, considered as a single population group, it is seen that the annual mortality rate during the period December 15, 1889, to February 8, 1890, was 26.7, as against 35.2 for the period September 29 to November 23, 1918. In the peak week the rate rose to 55.6 in the 1918 epidemic as compared with 35.4 in the 1889–90 epidemic.

2. While considerable irregularity in the curves as plotted in figure 1 is evident, the curves of the two epidemics manifest, on the whole, quite a striking similarity for the same cities considered individually and as a whole. The length of the primary stage or wave—aside from recrudescences or continuance of relatively high, but not truly epidemic mortality rates—was quite similar for the two epidemics in all of the cities.

"PATENT MEDICINES"—DISCLOSURE OF INGREDIENTS.

REGULATION REQUIRING DISCLOSURE OF INGREDIENTS OF PROPRIETARY MEDICINES HELD INVALID BY NEW YORK COURT, BUT CAPABLE OF AMENDMENT SO AS TO MAKE IT VALID.

That portion of the sanitary code adopted by the board of health of the city of New York, which requires the names of the ingredients of patent or proprietary medicines to be registered in the department of health before such medicines can be sold, has been declared invalid by the New York Court of Appeals.[1]

When the ordinance went into effect, the plaintiff, a concern engaged in the importation and sale of proprietary and patent medicines, had in stock large quantities of drugs, the ingredients of which it did not know and could not ascertain. The ordinance did not except such merchandise from its operation, and the plaintiff contended that it was void, because in effect an absolute prohibition was laid upon the sale of its existing stock. This contention the court of appeals sustained. In the opinion the court said:

> The argument is made that the ordinance is an arbitrary exercise of the power of government. We do not think so. Its purpose and effect are well within the limits of the police power. The purpose is the preservation of the public health and safety. * * * The form of protection is publicity. * * * The public health is safeguarded by disclosure to public officers charged by law with its protection. * * * One other objection to the ordinance is yet to be considered. We think it points to

[1] E. Fougera & Co., Inc., v. City of New York et al., 120 N. E. 642.

a real defect, though one that amendment may correct. The ordinance does not except existing stores of merchandise in the hands of druggists or other dealers, who do not know the ingredients and can not state them. That is the plaintiff's plight. * * * In effect, therefore, an absolute prohibition is laid upon the sale of its existing stock. * * * Without warning and without fault, its right of property has been forfeited. There must be many others in a like predicament. We do not need to say that there is no power, even in the legislature, to work this forfeiture. * * * The defect is so far-reaching, it is so deeply wrought into the substance of the law, that there is no opportunity to sever the good from the bad. * * * On the ground that the ordinance in its application to merchandise previously acquired fails to save the rights of dealers unable to comply with its requirements, we hold that the board of health has exceeded the powers delegated to it.

ANTIVENEREAL DISEASE NEWS.

The United States Public Health Service, Division of Venereal Disease, is conducting approximately 175 clinics. During the period from November 15 to December 15, 1918, there was a total of 19,456 visits to 29 clinics, or an average daily attendance of 38.1 at each clinic. There were 2,489 new cases, which was an increase of 188 cases over the number of admissions of the preceding month. A total of 25,543 treatments were administered and 11,195 cases were remaining under treatment in the clinics, hospitals, and detention homes on December 15. As a result of 1,845 "follow-up visits" made by the clinic nurses and social workers, there were 1,070 visits to the clinics.

Minnesota has shown good results in her clinics. It is claimed that this is due to extensive social-service work, which involves following up by correspondence as well as by investigation. It has been possible to secure the adherence of incorrigible cases to a routine of precautions, so as to protect others from infection.

Many thousands of letters requesting pamphlets and expressing a desire to assist in the conflict against venereal diseases have been received from various States. Twenty thousand druggists have pledged themselves to refrain from selling nostrums for the treatment of venereal disease. Five thousand pledges not to publish advertisements of quack doctors have been received from newspapers.

THE CURE OF VENEREAL DISEASES.

MESSAGES FROM UNITED STATES SURGEONS GENERAL.

Surgeon General of the United States Public Health Service.

You can not compromise with venereal diseases. Unless cured, syphilis and gonorrhea, or "clap," know only one result—the destruction of the human body. Venereal disease in a person's body

must be driven out—every trace of it. Otherwise it will spread and grow worse, sapping strength, undermining health, and leading to serious physical disability; or, like an enemy under fire, it may retreat from sight, leaving the impression that the body is safe and sound again. Unless completely cured it lurks in the body and may break out again, years later. Such is the deceit and treachery of venereal disease.

Self-treatment with simple or patent remedies will not cure venereal disease. It may cause the outward symptoms to disappear, but to cover up a disease is not to cure it.

The only safe and certain way to a complete cure of venereal disease is treatment by a competent physician. It is necessary to continue the treatment until rigid medical tests show a complete cure. Some of the most serious after-effects of venereal disease are due to stopping treatment too soon.

Self-treatment probably costs less in the beginning, but you are fighting a dangerous enemy, and the weapons must be chosen accordingly. The Allies, armed with popguns, could never have defeated Germany. Popguns cost less; but the most expensive things in the long run are those which do not give results, and the self-treatment of venereal disease does not give the desired results.

So if you have intended to treat yourself for a venereal disease, or have started to do so—

STOP! Even though you may be improving—STOP!—RIGHT NOW!

Go to a competent physician or venereal clinic. Avoid quack doctors or medical institutes advertising quick cures. They are far more interested in your pocketbook than in your recovery.

Remember that cheap treatment for a dangerous infectious disease never pays. With health wrecked or only partly restored, the money saved by such treatment can give little pleasure.

Always remember that venereal disease *can* be cured. But do not forget that neglected or improper treatment may ruin a person's health beyond repair.

Take no chances when attacked by anything so treacherous as a venereal disease.

RUPERT BLUE,
Surgeon General.

Surgeon General of the United States Army.

"Blood remedies that promise to eradicate syphilis should not be relied upon under any conditions, and the same applies to 'sure shots' for gonorrhea, which may stop discharges, but will not cure."—*Surgeon General of the Army.*

Surgeon General of the United States Navy.

"Self-treatment of venereal disease is not permitted in the Navy. All cases must be treated under the direction of a medical officer. No other method would be tolerated."—*Surgeon General of the Navy.*

SOME ASPECTS OF MALARIA CONTROL THROUGH MOSQUITO ERADICATION.

By C. W. METZ, Special Investigator, United States Public Health Service.

From a sanitary standpoint one of the most striking accompaniments of the recent military activities in this country has been the institution of malaria-control operations on a scale probably never before attempted except on the Isthmus of Panama during the construction of the canal. These operations have been intended primarily to prevent the introduction and spread of malaria in the various newly established cantonments, munition factories, and other places of military importance, but they of necessity also embraced large areas of civilian territory and have affected a vast rural and urban population. In connection with this campaign practically all known antimalaria measures have been used, including quininization, screening, etc., but the great bulk of the work has been devoted to mosquito eradication. Within the actual military areas themselves this work has been conducted principally by the Army Medical Corps. In the surrounding zones—constituting by far the larger and more menacing territory—however, it has fallen to the lot of the United States Public Health Service, aided by such local health organizations as happened to be available in the respective localities.

To meet the requirements of the sudden exigency, the Public Health Service force engaged in malaria control was, of course, rapidly enlarged and put immediately to work, without the formality of complete standardization of methods and organization that might have been effected had more time been available.[1] As a result the conduct of operations in the various extra-cantoment zones, although based upon the same general principles throughout, has differed somewhat from place to place, so that it is difficult to include all of the methods of procedure in one general statement. Consequently, the following account will be based largely upon the operations with which the writer is personally familiar, and will not attempt to cover all of the modifications of procedure to be found in different regions.

It should also be made clear at this point that the present communication makes no pretence at being a complete discourse on mosquito

[1] It might be added, parenthetically, that a great deal of good has come from this necessity. With many men working along the same lines in differet parts of the country, and each presented with his own local problems, the result has been that numerous innovations, ingenious methods, more efficient tools, etc., have been introduced, greatly to the benefit of the operations as a whole.

control. Details of many phases are entirely omitted, as these are already well known and are accessible in published accounts.

In general the principles of mosquito control used in the extracantonment sanitation have been those used so effectively in the Canal Zone, and described by Le Prince and Orenstein (1916). They consist primarily of drainage and oiling—drainage where the water can be disposed of, and oiling where it must remain. Both of these methods are aimed, of course, at the *Anopheles* larvæ. Little, if any, attempt has been made to combat the adult mosquitoes, since the other methods are found much more effective.

Knowing, with a fair degree of certainity, that malaria transmission is effected only by mosquitoes of the genus *Anopheles*, and knowing the approximate range of flight of these insects, it remains to eliminate them from a zone around each camp corresponding with the range of flight, namely, 1 to 2 miles. The exact extent of the zone varies somewhat in different places, depending upon the amount of breeding and the exigencies of the work, but as a rule it is intended to cover all prolific breeding areas within 2 miles of habitations occupied by the people to be protected. This includes, in typical extracantonment work, the zone around the cantonment proper and similar zones around the rifle range, remount station, aviation fields, and other auxiliary military areas.

In the region east of the Mississippi, which is the region of primary interest from the present standpoint, there are three species of mosquitoes to be considered as vectors of malaria, *Anopheles quadrimaculatus*, *Anopheles punctipennis*, and *Anopheles crucians*. These species differ strikingly from one another in appearance and in habits, and probably also in their importance as agents of malaria transmission. Regarding the latter point, however, too little is known at the present time to allow of much discrimination, and as a rule all *Anopheles* are treated alike in control operations. It is well, nevertheless, to keep in mind the principal characteristics of the different species and also the main questions that remain unsettled. This will lead to more intelligent field work and allow more information to be obtained regarding the uncertain points. The main features of interest are as follows:

Anopheles quadrimaculatus.—This species may be distinguished from either of the other two by its relatively hyaline wings, with their four dot-like aggregates of scales. Its larval habits are relatively exact, with a restricted range of adaptability. Like other *Anopheles* it breeds in natural waters in preference to artificial containers, eaves troughs, etc., although it will occasionally, when hard pressed, breed sparingly in these, too. In general it chooses quiet water, either ponds, swamps, pools, puddles, lakes, or lagoons. Apparently it is very seldom found in running water, although evidence on this

point is not entirely conclusive. It is perhaps the most fastidious of the three species in regard to the character of the water in which it breeds. A small amount of sewage will effectually prevent breeding, as will also relatively small amounts of chemical or other contamination.

As a vector of malaria *quadrimaculatus* undoubtedly heads the present list; it transmits the malaria plasmodia readily, as has been shown both by practical observations and by laboratory experiments. Not only does it appear to be physiologically well adapted to this rôle, but it has habits of feeding that make it particularly effective. It seems to have an especial fondness for the society of man, and will enter houses to feed more readily than will either of the other two species. Whether it actually prefers human blood to that of domestic animals is not known, but apparently its fondness for man is almost or quite as great as for domestic animals, whereas the other two species exhibit a definite preference for the latter.

Anopheles punctipennis.—In point of numbers and general distribution this species should rank first. It is easily distinguished from the other two by the marginal white or yellowish spot on the heavily scaled wings and by the slender thorax with a pale longitudinal stripe along the dorsum. Its larvæ appear to be indistinguishable from those of *quadrimaculatus*. Its choice of a breeding place may include any of those mentioned for *quadrimaculatus*, and in addition streams or ditches of running water, provided, of course, the flow is not so rapid as to destroy the larvæ or prevent breeding. Apparently *punctipennis* is also somewhat less fastidious about the character of the water in which it breeds, as it seems able to stand more contamination than *quadrimaculatus*. On this point, however, there is little exact evidence.

Owing, apparently, to the different habits of the adults, *punctipennis* is generally thought to be less effective as a malaria vector than *quadrimaculatus*. It is known to harbor the malaria plasmodia and allow typical growth and development of the parasites, and also to transmit malaria under laboratory conditions (Mitzmain, 1916), but observations by several competent persons in various localities have led to the impression that *in nature* it is relatively unimportant as a vector of malaria.[1]

The importance from a practical standpoint of determining the rôle played by *punctipennis* in malaria transmission may be appreciated by considering the immense amount of money that is being spent on the eradication of *punctipennis* breeding places in running water alone, practically all of which could be saved if it were certain that the species is not a frequent vector of malaria.

[1] See recent summary by Asst. Surg. Gen. H. R. Carter, Reprint No. 464 from Public Health Reports, 1918.

Anopheles crucians.—This species is generally less common than the other two and is found in the most restricted localities, although it may be extremely abundant in suitable places. It is readily distinguished from either of the others by the wing markings, among which may be mentioned especially the apical yellowish or white spot and the three dark bands on the sixth vein. The larvæ of *crucians* in the later stages may sometimes be distinguished from those of the two others by the palmate dorsal hairs. The distinction may be appreciated by reference to a good figure, such as that in plate 84 of Howard, Dyar, and Knab's "Mosquitoes of North and Central America." It will be observed that the larva of *punctipennis* or *quadrimaculatus* has a pair of palmate tufts of hair on the dorsum of each of the third to seventh abdominal segments, and that all of these pairs are of practically the same size. This is characteristic of *punctipennis* and *quadrimaculatus;* but in *crucians* the first and last of these pairs are very small. In other words, *crucians* has large palmate tufts on the fourth, fifth, and sixth segments only, with small ones on the third and seventh. It should be noted that the posterior pair of tufts is frequently small in any of the species, but so far as the writer has been able to observe the distinction holds for the tufts on the third segment.[1] In breeding habits, likewise, *crucians* differs rather sharply from the other two species. Although it may sometimes be found in company with either of the latter it is often to be found in brackish waters or waters contaminated with chemicals. In such places, when the contamination is great enough to prevent the breeding of other *Anopheles, crucians* may sometimes be found in enormous numbers. The writer has recently been studying one such place in which the drain from a chemical factory so contaminated the water that many aquatic organisms, including fish, were killed, and *crucians* had a clear field. In this swamp *crucians* were being produced literally by the millions, although not a single *punctipennis* or *quadrimaculatus* was obtained out of scores of larvæ and adults examined.

As a vector of malaria *crucians* is a relatively unknown quantity. Presumably it is an efficient carrier, as suggested by the prevalence of malaria in localities such as that just mentioned where the other species are uncommon and by the fact that it is known to harbor at least one of the malaria parasites (Mitzmain, 1916); but on the other hand *crucians* resembles *punctipennis* in its apparent preference for the company of domestic animals rather than that of man. This is another matter requiring further investigation.

[1] Since the above was written it has been found that the distinction does not hold in all localities. In Florida the writer has found crucians larvæ with large palmate tufts on the third segment. Another distinction, pointed out by Howard, Dyar, and Knab, is based on the fact that *quadrimaculatus* and *punctipennis* typically have a small tuft of hairs on the second segment, making six in all, whereas *crucians* has only five. This criterion, however, is also unreliable, for the tuft on the second segment is frequently absent (as, e. g., in the specimen figured in the plate cited above).

From the foregoing it may be seen that additional evidence is greatly needed regarding certain phases of mosquito control in relation to malaria, and that until this is obtained safety demands the control of all *Anopheles*. In case a selection must be made, however, it appears advisable to control *quadrimaculatus* first by eliminating breeding in still water, especially grassy puddles and pools.

Turning now to the question of ways and means of control, the salient features may be considered under three headings: Drainage, oiling, and accessory measures.

Drainage.

In drainage we have the most reliable and most permanent control. Where there is no water in which the larvæ may develop there will be no mosquitoes, and when a place is once properly drained it will not become a nuisance again for a considerable period of time. Drainage, then, is the main reliance in mosquito control unless the effort is intended to be only a very temporary expedient. Under drainage, from the present standpoint, are included several features peculiar to mosquito control and perhaps not included under drainage as the engineer would define it. Among these may be mentioned cleaning of ditch banks, removing débris from streams, etc. Drainage may be either of the usual type, or under special circumstances the so-called "vertical drainage." These will be considered separately.

Since all of these measures are aimed at the destruction of *Anopheles* larvæ, attention should first be directed to the general conditions necessary to bring this about. The methods are simple, but upon the proper choice of methods may depend many lives and thousands of dollars.

Anopheles larvæ will not develop in a locality if—

1. The water is completely drained off; or

2. The water surface is entirely cleared of vegetation or other obstructions, the banks cleaned and cut down vertically, giving a smooth margin; and

(*a*) An abundance of suitable fish made available to keep down the larvæ; or

(*b*) A complete film of oil applied to the entire surface; or

(*c*) A swift flow of water set up to carry off the larvæ or prevent their feeding; or

3. The water is treated with an effective larvicide.

Obviously the choice between these methods will vary according to the nature of the place and the degree of permanence desired for the results.

Surface drainage.—In practice one may find himself confronted with any one or all of the following types of areas requiring drainage:

Temporary puddles, stagnant ditches, borrow pits, old wells, cisterns, ponds, lakes, swamps, marshes, streams, lagoons, and bayous. Of these the temporary puddles, unless there are several of them in a locality that may be ditched without much difficulty, can probably be controlled best by the use of oil. Roadside ditches—excellent breeding places as a rule—can usually be ditched without much difficulty and eliminated at once. (See reference to ditching machine at the end of this paper.) Borrow pits are treated according to circumstances. Many are too deep to be drained and must be oiled. Not infrequently they are deep enough down in the sterile earth to be practically devoid of aquatic life and can be ignored, but in this case frequent careful inspections should be made to see that they remain free from larvæ. Old wells, cisterns, and the like may often be filled to advantage, or oiled, or treated with chemicals as described later; it is seldom advisable to attempt drainage. It is when we come to ponds, lakes, and swamps that the real problems arise, and it is best perhaps to consider these three together. Since the difference between lakes and ponds is only one of degree, and since swamps may include either or both of the other two, it is obvious that in actual practice little distinction can be made that would involve different methods of drainage. It is more important to classify such areas according to the sources of water, for in this case the distinctions correlate with modes of treatment. For instance, one pond or swamp may be caused by the accumulation of rain water and may fluctuate greatly with the seasons, another may be simply a basin in the channel of a sluggish stream, while a third may be fed from springs and may be bordered by a seepage outcrop. In the first of these, the rain-water swamp, it is merely necessary to provide a small channel to carry off the surplus water left after the main flood waters have passed. As a rule one or two ditches will suffice. In the second case the situation is more difficult, for the water supply is continuous and fluctuating. The swamp will vary in size with high and low water in the stream, and a drainage operation of considerable magnitude may be required to eliminate it. Before determining the method of procedure in such a case it is well to consider the fundamental requirements of mosquito control with a view to selecting the most economical and effective method. In case drainage is decided upon it will probably take the form of channeling the stream below the swamp to lower the water and increase the flow.

Otherwise a combination of clearing[1] and oiling will probably prove most effective. The third case mentioned—that of a swamp

[1] Clearing the vegetation from a swamp does not require cutting down the trees, except in very unusual circumstances. There is little support for the popular impression that sunlight will eliminate larvæ. If the water must be oiled after clearing, it may as well be oiled in the shade. This will save the trees and the expense of cutting them, will provide more comfort for the oilers, and will lessen the rapidity of evaporation of the oil. Also it will probably be conducive to better relations with property owners.

fed by a seepage outcrop—presents the most difficult problem of all. Here we have not only an area of standing water, probably full of vegetation, but also a series of tiny puddles in the form of hoof prints, etc., along the outcrop margin. Each of these is a potential breeding place of the worst kind. The treatment of such an area requires a special procedure, and since the proposition is one that is

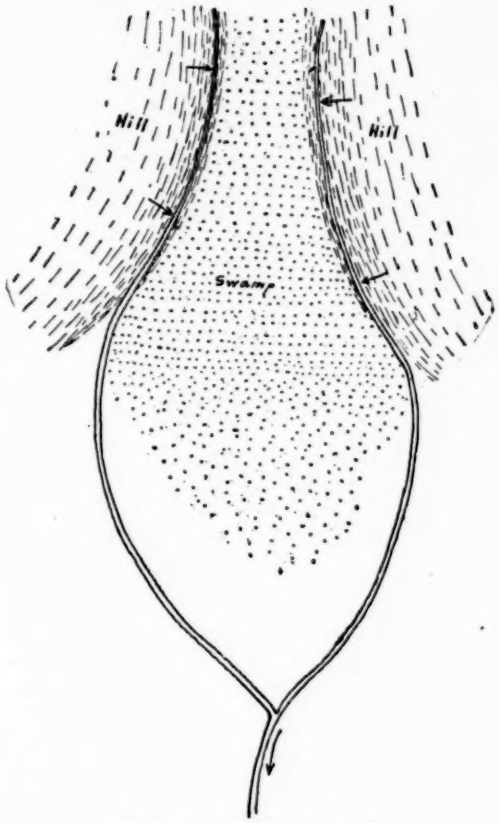


FIG. 1.—Seepage outcrop ditches.

apt to be found in most any locality it may be considered in some detail.

Treatment of seepage outcrops.—Seepage water usually appears on hillsides, etc., at the outcrop of a stratum of water-bearing sand or gravel underlain by an impervious stratum of clay, shale, or other material. The outcrop may be in the nature of more or less distinct springs, or simply a gradual oozing out through the soil. In either case it is fed by a water table below the surface, and treatment must be aimed particularly at this water table. It does not suffice to dig ditches directly away from the springs and down the hillside.

Such a method would require a separate ditch for each spot from which water is issuing, and would mean, in many cases, a series of ditches about 12 inches apart along the whole hillside. The only effectual way of collecting the water in such places is by means of ditches dug *at right angles to the flow of the seepage water*, or, in other words, across the exposed end of the water table. Such ditches

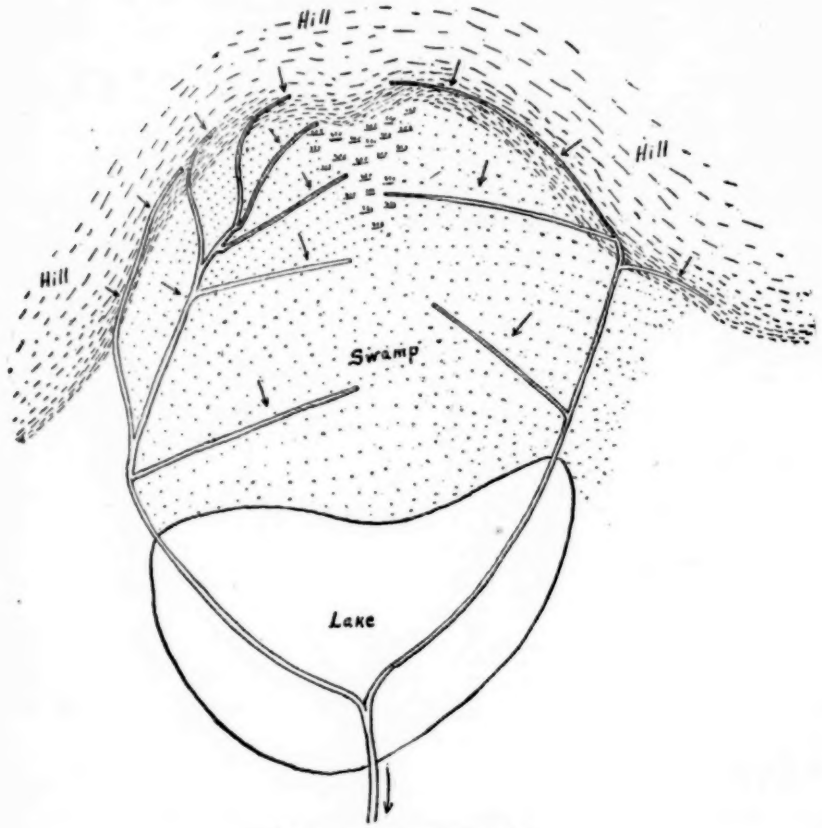


FIG. 2.—Seepage outcrop ditches.

may then be connected to one or more main ditches, if necessary, and the water carried down the hillside parallel to the seepage flow. These points are illustrated roughly in the accompanying sketches of actual swamps.

In No. 1 there was seepage on both sides of a narrow valley, the water coming out of two hills opposite one another, as shown by the arrows. As a result the bottom of the valley in this region was a typical cat-tail swamp with water from 1 inch to 2 feet in depth. Since the source was somewhat up on the hillside, it was useless to dig a ditch through the bottom of the swamp and down the valley. This would simply carry off the deep water and leave the seepy marsh as it was. Instead a deep, narrow ditch was dug along the

margin of each hill just at the upper edge of the seepage outcrop and at right angles to the flow of the seepage water. In this manner the water table was intercepted and all the water that formerly oozed out down the hillside now seeps into the ditch and is carried off. As a result the swamp, no longer fed from the hillside, has dried up.

In case No. 2 a more complicated situation is presented. Here the seepage flow is from a large U-shaped bend in a hillside, resulting in a swamp many acres in extent, with a small lake at the outer edge. The water table in this case extended clear across the swamp, but was concealed along a slight elevation running down the middle. On account of this elevation it was necessary to drain the right and left halves of the swampy area separately. As shown in the sketch a ditch was put along the toe of the hill on each side at the upper margin of the outcrop and then run off into the lake. But the water

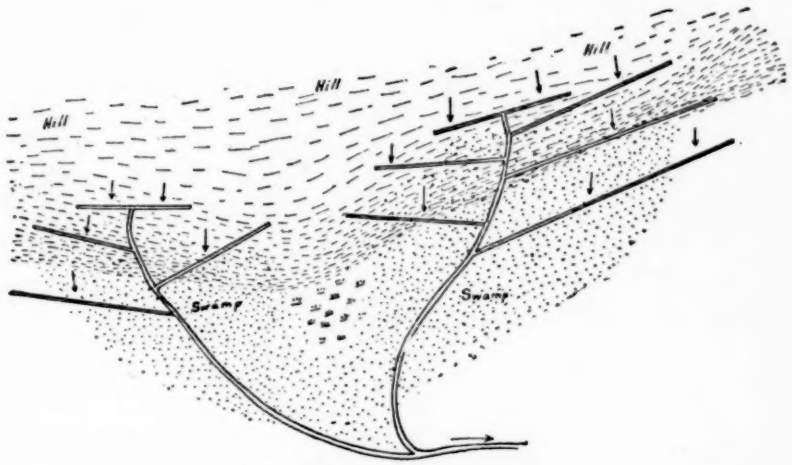


FIG. 3.—Seepage outcrop ditches.

table this time was too deep to be intercepted entirely by one ditch and it was necessary to dig additional intercepting laterals at intervals lower down. On one side five such ditches, more or less parallel to one another and at right angles to the seepage flow, were required to catch all of the water before it came to the surface.

In case No. 3 an outcrop on a relatively steep hillside is represented. Here it was necessary to dig several intercepting laterals parallel to one another and only a few feet apart in order to catch all of the flow. When this was done over the area in which the seepage water was actually coming out of the ground, the remainder of the swamp lower down the hillside became completely dry.

In each of these cases collection of the water depended upon the ditches being constructed primarily as intercepting rather than conducting ditches. In the case of swamp No. 1 the ditches happen to be intercepting and conducting at the same time; but more often

separate conducting ditches must be constructed to carry off the water after it has collected in the intercepting ditches.

With the exception of a few features like these most of the drainage work is largely a matter of running levels and managing labor. Common sense and practice are the main requisites. Here, as in the rest of the work, the habits of the mosquitoes must be kept in mind. For instance, a swiftly running ditch is better than a sluggish one; water confined in a narrow channel will run more swiftly, give less surface and be easier to oil; hence V-shaped ditches are usually preferable to wide-bottomed ones. If the ditch is large and the sides are apt to cave, they should be sloped. Sandy soil caves easily and requires relatively wide ditches. A large ditch, primarily to carry

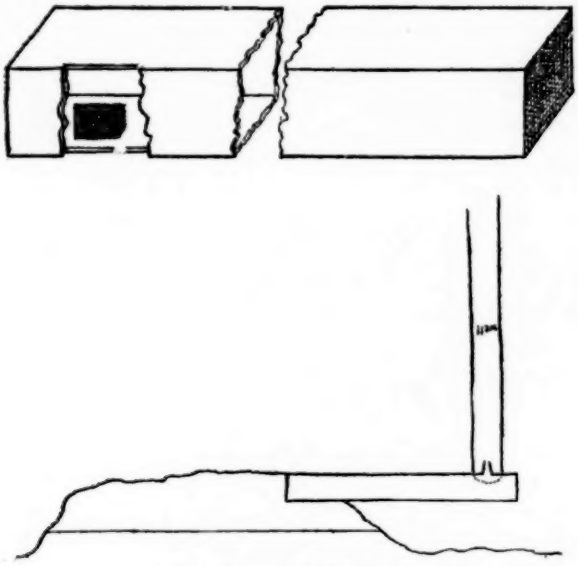


FIG. 4.—Improvised drain head.

flood waters, is apt to transform into a series of shallow puddles in the dry season. An efficient remedy for this is a small V-shaped ditch about the width of a shovel down the middle of the large ditch. It will often eliminate all of the little puddles.

Vertical drainage.—By vertical drainage is meant drainage by means of wells sunk vertically; the purpose being to conduct the water down through relatively impervious soil into water-bearing sand or gravel. Such drainage is usually advisable only where surface drainage is very difficult or expensive. No thoroughly tested and standardized method has yet been worked out for this form of drainage, but several types of drains have been used with fair success. Holes are bored near the margin of the water to be drained, and are

sunk down into an underlying water-bearing stratum. The number and size of these holes depends upon the amount of water to be drained, the rapidity with which it must be carried off and the nature of the underlying stratum. If the stratum is near the surface large, open wells may be dug or blasted out and the water carried off rapidly. If it is deep down, holes should be bored with a boring outfit and drain heads installed. Fabricated drain heads may be purchased or improvised drain heads may be made on the spot. One type used by the writer, and found to give satisfaction up to the present time, is made as follows:

An elongated, narrow, culvertlike box is constructed out of rough lumber. One end is closed tightly, and in the bottom near this end a small hole, 2 to 4 inches in diameter, is cut to come directly over the well. The hole should be only one-fourth to one-third the diameter of the well in order that the water may fall into the well without washing the sides. This box is to be laid as a pipe connecting the well with the pond and the bottom of the box should be just level with the bottom of the pond, otherwise the water will fail to flow in, or will flow too rapidly and will wash in a large amount of sediment. At best some sediment will be carried, and to reduce this to a minimum a fine screen, covered with a coarse screen is placed over the end of the box and over the hole leading into the well.

An improvement might be added to this drain head in the shape of a pipe or funnel-shaped conductor suspended vertically into the well from the hole in the box. This would tend to reduce the washing and consequent crumbling of the sides of the hole.

In practice this type of well has been used in clay soil without any lining, but in a softer soil the hole would probably require casing with tile or iron pipe to prevent its caving in.

Oiling.

Next to drainage and as an adjunct to it, oiling is the main reliance in mosquito control. The general principles of this process are well known, but a few features may bear repetition or emphasis in this connection. Since *Anopheles* seldom develop in less than 8 to 15 days, even in warm weather, it is customary to apply oil about once a week. No definite formula can be given for the oil to be used. Straight kerosene is very effective, for it spreads rapidly and will make a very thin film. But it also evaporates rapidly, and is difficult to see on the water, hence it is usually mixed with so-called crude oil [1] in parts varying from 3 : 1 to 1 : 3, depending upon the circumstances and upon the thickness of the crude oil. The most satisfactory mixture is one that is nearly black in color and slightly thicker than

[1] True crude oil is very difficult to obtain; what is usually used is fuel or black oil.

kerosene in consistency. This spreads rapidly and is easily seen on the water. In this connection it should be emphasized that an exceedingly thin film is all that is necessary. This film may be seen by the sheen it gives to the water when viewed in the proper light—a characteristic easily noted after a little practice.

Oil may be applied in various ways. In ordinary work the spray can is the main reliance. The type generally used is some form of knapsack sprayer that can be easily carried and that has an adjustable nozzle. The nozzle should be adjusted to throw a very fine spray, otherwise much of the oil will remain in globules instead of spreading out in a film.

On small streams and ditches with a fairly good current drip cans are used to advantage. Most of those in use are constructed upon the same principle, but in details they are very diverse. A discussion of several types will be found in Le Prince and Orenstein's "Mosquito Control in Pamana." As a rule each worker introduces modifications to suit his own ideas or to suit the material available. A type of can used by the writer is constructed from an ordinary 5 or 10 gallon oil can having a spout near the top. The screw cap of this spout is perforated, and a nail, packed around the basal end with waste, is inserted in the hole.[1] The can is laid on its side with the spout down so that the oil drips out along the nail. By tightening or loosening the latter the flow can be regulated down to a few drops per minute.

Another type of can, reputed to be satisfactory, is composed of an ordinary oil can to which is attached an accurately ground petcock susceptible of accurate adjustment. It is probable, however, that this can exhibits the same tendency as others toward getting clogged up with sediment to such an extent that the flow is inhibited. All types of drip cans known to the writer require inspection every few hours to insure a regular flow.

As a substitute for drip cans oil-soaked waste or bags of oil-soaked sawdust are often used. These are fastened at or near the bottom of the ditch or stream at intervals varying with the size and rate of flow. Oil oozing out of the waste or sawdust comes to the surface, spreads out into a film, and floats down stream. As in the case of drip cans the amount of oil-soaked material necessary and the intervals between the stations depend upon the volume of water, etc., and must be determined for each place separately. A little practice will indicate the proper procedure. All that is necessary is that a continuous film be produced over the entire water surface, throughout the necessary distance, and for a period of at least 12 hours once a week.

[1] See p. 158 of Le Prince and Orenstein.

Oil-soaked sawdust, in addition to its use as a substitute for drip cans, may be sprinkled over the water surface and thus prove useful as a substitute for other methods of oiling. Its efficiency in instituting rapid control over water areas which have not been cleared of brush or débris is apt to be particularly satisfactory. The value here lies in the fact that the sawdust will often spread the oil film over the surface in spite of the weeds, sticks, grass, or whatever else would have a tendency to break up the film.

Very recently a method of oiling has been proposed by Surg. M. J. White, of the United States Public Health Service, which, when used in conjunction with oil-soaked sawdust, is intended to supplant all other methods. This is described in a circular letter issued by the United States Public Health Service, from which the following extract is taken:

"This method lays down the oil by capillarity. The wick is a piece of jute binder twine. It is common in station waste. The pepper can, also found in station waste, has a push lid which protects the oil from rain and is easily removed for subsequent filling of the can. The wick, previously oiled, is brought out the side of the can through a hole near the top made by raising the flap of the tin which also serves to prevent rain from beating in at this hole. A wire loop passed through the side of the can at two opposite points immediately below its lid is tied to a stout strip of wood or stick driven in the middle of the ditch or side of the pool at a sufficient inclination to permit the can to hang free. The can should be hung above the flood-water level and the distal end of the wick allowed to hang free in water, about 2 inches of it being submerged. The proximal end of the wick is anchored within the can by an iron nut. The can is refilled every three or four days, at which time the laborer squeezes or washes out the silt that may have accumulated on the submerged portion of the wick. The flow of the oil varies principally with the length of the wick and velocity of the water. If there are no surface obstructions such as algæ or fallen grasses, this method will supply a continuous film of oil. Fuel oil is used. If such obstructions exist they must be raked away daily so that the oil may spread. This continuous application of a thin film of oil is practiced to prevent oviposition. For larvicidal purposes the film is collected at points along the ditch by obstructing the surface with strips of wood placed across the ditch. These strips allow the water to pass beneath but arrest the surface oil. The larvæ swim away from the oiling focus and travel in the direction the oil travels. They will go upstream away from the wick if the wind bears the oil in that direction. Having determined the direction the oil will travel the wooden strips are placed from 50 to 100 feet apart. If algæ are present and rapid

work is desired a separate can is provided for each section. The oil accumulates at the wooden strips and as the larvæ, fleeing from the source of the oil, come in contact with this accumulated thick layer of oil, they receive lethal treatment. At first some of the larvæ will pass beneath the wooden strip from one section to another, but they soon succumb. In oiling a pool, cans are placed at selected points along the edges and the wind will drive the oil across. Constant oiling is thus maintained no matter the direction of the wind. A thin film of oil is larvicidal in the course of a day, and the pupæ appear to be less resistant than larvæ. Continuous oiling by capillarity is the method preferred for permanent ground pools and drainage ditches, while the sowing of oil-soaked sawdust is preferred for more or less temporary puddles, wagon tracks, hoofprints, postholes, and other small excavations. These two methods meet the requirements far better than the spray pumps and drip cans. Their use enables the laborers to devote most of their time to preventing obstructions, particularly algæ, that would interfere with the spread of the oil. They also effect substantial economy in the cost of labor, oil, and apparatus.

"The satisfactory use of oil-soaked sawdust is reported in the notes from the marine barracks at Quantico, Va., published in the Naval Sanitation Bulletin of June 14, 1918—Bulletin No. 29."

Accessory Measures.

1. *Fish control.*—Under suitable conditions fish control appears to be very effective, but it is a method that must be watched with care, for it is dependent upon the ability of the fish to obtain easy access to the larvæ, and anything that interferes with this will interfere with the control.

It goes without saying that it is also dependent upon the presence of the proper kind of fish. In the South these are usually members of the genus *Gambusia*, although other genera are said to be effective also. In case any doubts are entertained as to the best forms available for a given locality definite information may be secured from the Bureau of Fisheries.[1]

2. *Larvicides.*—At the present time larvicides are not being used to any great extent, except where they constitute the waste products of chemical factories. Probably the only one in anything like general use is niter cake, an acid by-product resembling slabs of marble in appearance. This is fairly efficient, but of limited usefulness. It is unsuited to running water or ponds that are frequently washed out by freshets. In old wells, abandoned cisterns, etc., it may be used to good advantage in case there is no danger of poisoning persons

[1] See also Radcliffe, 1915, in appended bibliography.

or domestic animals. It is said that stock will not drink water containing niter cake, but it would hardly be advisable to expose them to it unnecessarily.

The writer is at the present time experimenting with a combination oil larvicide in the form of creosote oils. This may prove to have some advantages due to the fact that it is more lethal than kerosene and that it may be effective without forming a complete film. In addition to its direct action on the larvæ, it is effective in reducing the larval food supply. The principal features of this method of control, so far as revealed by the preliminary tests, are as follows:

So-called "refined creosote" or commercial creosote, of a dark color and a consistency slightly thicker than that of kerosene, is applied in the form of a fine mist spray. The application differs essentially from that of kerosene or crude oil in that the oil is broken up into minute particles that float in the air like mist. Thus only a very small amount of material is used, as compared with the ordinary method of oiling. For this reason a small hand pump of half a gallon capacity will suffice in place of the usual 5-gallon knapsack sprayer, and a man can carry enough larvicide to last from several hours to a day or more instead of having to replenish his supply several times daily.

The style of pump used in the preliminary tests is of the automatic type that retains compression so as to provide a constant mist spray. It is the sort used for spraying disinfectants. The only essential feature is that a very fine "atomized" spray be secured—a mist that will float in the air.

Such a mist will settle over the surface of the water, into hoofprints, etc., and will float in among plants or other obstructions that may protrude above the surface, provided such obstructions do not form a complete canopy.

A remarkably small quantity of this material will kill *Anopheles* larvæ if properly applied. Apparently a film of creosote is not essential, as the lethal action is not brought about by suffocation so much as by poisoning, and the fine mist over the surface of the water suffices for this purpose.

For the treatment of small puddles, edges of streams, ponds, etc., and for handling a large territory where bodies of water are scattered and transportation is difficult this method holds considerable promise.

If the initial results stand the test of further trials on a larger scale and the method proves practicable for general use, it is believed that a substantial economy may be obtained in the lessened cost of labor, transportation, and material. The creosote costs from 20 to 30 cents per gallon in bulk, and it is estimated that 1 gallon will do the work of several gallons of oil.

Since creosote is poisonous to fish and other animals, it must be used with caution on water containing fish and on water used by stock. If a pond or stream is more than a few feet wide, fish are not affected by treatment of the edges. In small ditches with good current fish do not seem to be affected unless a large amount of oil is applied, but in small puddles even a light application is very apt to kill them. Owing to the irritating qualities of creosote, it is improbable that stock will drink water containing enough to do harm, but its use is not recommended in such cases except after careful trial.

The irritating effects of creosote are also felt by those who apply it if much is allowed to come in contact with the skin. For this reason, as well as to facilitate spreading the mist over the water, it is best, where possible, to apply it from the windward side.

In conclusion, a word may be said in regard to what might be called the social side of malaria control. The ultimate value of the present activities is going to be in direct proportion to the interest and appreciation that they evoke in the civilian communities. If the work stops with the termination of military activities, its value will have been merely ephemeral. But if, on the other hand, it proves to be the nucleus of an ever-increasing movement, its benefit to the country at large will be incalculable. Hence those conducting anti-malaria work in the field should miss no opportunity to make the work a public enterprise, understood by the public, upheld by public sentiment, and brought into the position of a permanent institution in the eyes of the public.

Useful Equipment and Supplies.

1. *Dynamite.*—With the present shortage of labor this is a valuable adjunct to ditching, either for the purpose of removing stumps from ditch lines or for digging the entire ditch. For the latter purpose the 50 or 60 per cent "straight nitroglycerine" dynamite should be used, for it only will explode by the "propagation method." Full details and demonstrations may be obtained from the leading dynamite manufacturers.

2. *Ditching machines.*—The horse and mule drawn ditching machines have been found very satisfactory for constructing ditches of less than 3-foot depth in open land. They make ideal V-shaped ditches, and in suitable localities may be operated very cheaply. In cleaning out roadside ditches they are particularly effective.

3. *The phosphate drag.*—This tool, somewhat resembling a potato fork, but much more substantial, is invaluable for cleaning out ditches or for working in marshy land that is full of roots, etc. It is so strong that it will last indefinitely even with the hardest usage, and its construction makes it superior to shovels or rakes for work

in soft ground. If not available locally, it may be obtained from wholesale hardware firms.

More specific information regarding the equipment mentioned above, the particular types found most useful, where they may be purchased, etc., may be obtained by addressing the United States Public Health Service, Washington, D. C.

Literature Cited.

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LE PRINCE and ORENSTEIN. 1916. Mosquito control in Panama. Putnams Sons, New York.

MITZMAIN, M. B. 1916. Tertian malarial fever, transmission experiments with *Anopheles punctipennis*. Reprint No. 337, Public Health Reports.

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PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

EXTRA-CANTONMENT ZONES—CASES REPORTED WEEK ENDED JAN. 25.

CAMP BEAUREGARD ZONE, LA.

	Cases.
Alexandria:	
Chicken pox	1
Gonorrhea	1
Influenza	129
Measles	2
Meningitis	1
Mumps	1
Malaria	4
Pneumonia	1
Pineville:	
Influenza	11
Rural district:	
Influenza	7
Tioga:	
Influenza	1

CAMP BOWIE ZONE, TEX.

Fort Worth:	
Chicken pox	2
Diphtheria	1
Gonorrhea	10
Influenza	6
Meningitis	1
Pneumonia	13
Poliomyelitis	1
Scabies	6
Scarlet fever	1
Smallpox	1
Syphilis	1
Trachoma	2
Tuberculosis	3
Typhoid fever	1

BREMERTON ZONE, WASH.

Influenza	129
Pneumonia	5

CHARLESTON SANITARY DISTRICT, S. C.

Charleston:	
Influenza	449
Syphilis	1
Tuberculosis	2
Typhoid fever	1

CAMP DEVENS ZONE, MASS.

	Cases.
Influenza:	
Ayer	3
Lancaster	1
Shirley	5
Tuberculosis, pulmonary:	
Ayer	2
Whooping cough:	
Lancaster	3

CAMP DIX ZONE, N. J.

Diphtheria:	
New Hanover Township	1
Tuberculosis:	
Pemberton Township	2

CAMP DONIPHAN ZONE, OKLA.

Lawton:	
Gonorrhea	2
Syphilis	1

CAMP EBERTS ZONE, ARK.

Chicken pox:	
Lonoke, R. F. D	2
Influenza:	
Austin	4
Austin, R. F. D	8
Cabot	4
Cabot, R. F. D	5
Carlisle	6
England	[1] 6
England, R. F. D	[1] 15
Keo	15
Lonoke	[2] 6
Lonoke, R. F. D	[2] 27
Ward	10
Malaria:	
Cabot	3
Kerr	1
Measles:	
England, R. F. D	[1] 1

[1] From Dec. 20, 1918, to Jan. 24, 1919.

[2] From Dec. 12, 1918, to Jan. 23, 1919.

CAMP EBERTS ZONE, ARK.—continued.

	Cases.
Pneumonia:	
England	2
Lonoke, R. F. D	3
Syphilis:	
Lonoke	1

FAYETTEVILLE SANITARY DISTRICT, N. C.

Chicken pox	2
Influenza	195
Mumps	3
Pneumonia	24
Syphilis	1

CAMP FUNSTON ZONE, KANS.

Cleburne:	
Influenza	2
Junction City:	
Gonorrhea	2
Pneumonia	1
Scarlet fever	2
Manhattan:	
Diphtheria	1
Influenza	35
Measles	2
Mumps	4
Pneumonia	5

GAS AND FLAME SCHOOL ZONE, GA. AND ALA.

Chicken pox:	
Columbus	1
Influenza:	
Bibb City	1
Columbus	67
Girard	18
Muscogee County	39
Phoenix City	38
Meningitis:	
Bibb City	1
Pneumonia:	
Columbus	4
Girard	1
Scarlet fever:	
Muscogee County	1
Smallpox:	
Columbus	1
Girard	1
Tuberculosis:	
Columbus	1
Muscogee County	1
Phoenix City	1

GERSTNER FIELD ZONE, LA.

Influenza	40
Pneumonia	1
Smallpox	35

CAMP GREENE ZONE, N. C.

Charlotte Township:	
Gonorrhea	8
Influenza	35
Syphilis	5
Tuberculosis	1

GULFPORT HEALTH DISTRICT, MISS.

	Cases.
Chicken pox:	
Pascagoula	1
Diphtheria:	
Biloxi	1
Dysentery:	
Gulfport	1
Gonorrhea:	
Gulfport	2
Pascagoula	1
Hookworm:	
Pascagoula	1
Influenza:	
Bay St. Louis	3
Biloxi	50
Gulfport	115
Handsboro	7
Kiln	2
Logtown	8
Long Beach	37
Lyman	2
Mississippi City	19
Moss Point	80
Ocean Springs	7
Pascagoula	15
Pass Christian	41
Scattered	3
Malaria:	
Gulfport	1
Logtown	3
Moss Point	4
Pascagoula	1
Measles:	
Gulfport	1
Mumps:	
De Lisle	3
Mississippi City	1
Moss Point	1
Pneumonia:	
Biloxi	4
Gulfport	5
Handsboro	2
Kiln	3
Logtown	1
Long Beach	1
Mississippi City	3
Moss Point	13
Pass Christian	6
Scattered	1
Scarlet fever:	
Gulfport	2
Syphilis:	
Kiln	1
Tuberculosis:	
Gulfport	1
Logtown	1
Whooping cough:	
Logtown	3

CAMP HANCOCK ZONE, GA.

Augusta:	
Diphtheria	1
Influenza	287
Smallpox	1

CAMP HUMPHREYS ZONE, VA.

	Cases.
Chicken pox:	
Alexandria	1
Alexandria County	2
Fredericksburg	3
Influenza:	
Alexandria	96
Alexandria County	5
Fairfax County	17
Fredericksburg	50
Measles:	
Fairfax County	1
Mumps:	
Fredericksburg	2
Pneumonia:	
Fairfax County	2
Syphilis:	
Alexandria	1

CAMP JACKSON ZONE, S. C.

Columbia:	
Influenza	726
Measles	6
Pneumonia	1
Tuberculosis	1
U. S. Government Clinic:	
Gonorrhea	3
Syphilis	6

CAMP JOSEPH E. JOHNSTON ZONE, FLA.

Jacksonville:	
Chancroid	3
Chicken pox	1
Chicken-pox carrier	1
Erysipelas	1
Gonorrhea	19
Influenza	143
Measles	31
Mumps	3
Pneumonia	2
Scarlet fever	1
Syphilis	16
Trachoma	1
Tuberculosis	5
Typhoid fever	1

FORT LEAVENWORTH ZONE, KANS.

Leavenworth:	
Diphtheria	2
Influenza	11
Leavenworth County:	
Diphtheria	4
Influenza	17
Mumps	1
Pneumonia	1

CAMP LEE ZONE, VA.

Ettricks:	
Influenza	1
Petersburg:	
Gonorrhea	3
Influenza	24
Measles	3
Pneumonia	1
Syphilis	2
Typhoid fever	1
Prince George County:	
Influenza	2

CAMP LEWIS ZONE, WASH.

	Cases.
Influenza:	
Custer	1
Lakeview	4

CAMP M'ARTHUR ZONE, TEX.

Waco:	
Diphtheria	1
Influenza	7
Pneumonia	9
Scarlet fever	1
Tuberculosis	1

CAMP M'CLELLAN ZONE, ALA.

Anniston:	
Gonorrhea	4
Influenza	15
Mumps	1
Smallpox	2
Syphilis	3
Tuberculosis	1
Precinct 15:	
Pneumonia	1

CAMP MERRITT ZONE, N. J.

Diphtheria:	
Englewood	1
Influenza:	
Bergenfield	6
Closter	1
Dumont	4
Englewood	74
Haworth	1
Tenafly	6
Measles:	
Englewood	1
Pneumoria:	
Bergenfield	6
Englewood	7
Scarlet fever:	
Englewood	4
Tuberculosis:	
Englewood	1
Tenafly	1

MUSCLE SHOALS SANITARY DISTRICT, ALA.

Florence:	
Measles	10
Muscle Shoals:	
Chancroid	21
Diphtheria	1
Gonorrhea	20
Influenza	78
Malaria	1
Measles	1
Mumps	16
Pneumonia	6
Scabies	3
Smallpox	2
Syphilis	8
Sheffield and Tuscumbia:	
Influenza	2
Measles	8
Pneumonia	2
Typhoid fever	1

FORT OGLETHORPE ZONE, GA. AND TENN.

	Cases.
Diphtheria:	
Chattanooga	1
Gonorrhea:	
Altonpark	1
Chattanooga	13
Influenza:	
Chattanooga	13
Eastlake	2
North Chattanooga	10
Rossville	5
Pneumonia:	
Eastlake	1
Scarlet fever:	
Chattanooga	1
Syphilis:	
Chattanooga	9

PICRIC ACID PLANT ZONE, GA.

Brunswick:	
Gonorrhea	5
Influenza	33
Measles	11
Pneumonia	3
Smallpox	2
Syphilis	7

CAMP PIKE ZONE, ARK.

Chicken pox:	
Little Rock	15
German measles:	
Little Rock	1
Gonorrhea:	
Little Rock	7
Influenza:	
Halsted	4
Jacksonville	19
Levy	6
Little Rock	443
North Little Rock	48
Picron	7
Measles:	
Little Rock	2
North Little Rock	2
Meningitis:	
Little Rock	1
Mumps:	
Little Rock	6
Pneumonia:	
Levy	1
Little Rock	45
North Little Rock	5
Scarlet fever:	
Little Rock	6
North Little Rock	1
Syphilis:	
Little Rock	3
North Little Rock	2
Trachoma:	
Little Rock	1

CAMP POLK ZONE, N. C.

Influenza:	
Durham	80
Durham County	29
Raleigh	400

CAMP POLK ZONE, N. C.—Continued.

	Cases.
Measles:	
Durham County	1
Wake County	4
Mumps:	
Raleigh	1
Smallpox:	
Durham County	1
Typhoid fever:	
Durham	2
Wake County	1

PORTSMOUTH AND NORFOLK COUNTY HEALTH DISTRICT, VA.

Gonorrhea:	
Portsmouth	3
Influenza:	
Norfolk	14
Norfolk County	76
Portsmouth	70
Measles:	
Norfolk	1
Portsmouth	1
Mumps:	
Norfolk	1
Norfolk County	1
Syphilis:	
Portsmouth	1
Tuberculosis:	
Portsmouth	3

PORTSMOUTH-KITTERY SANITARY DISTRICT, N. H. AND ME.

Influenza:	
Eliot	9
Kittery	7
Portsmouth	17
York	10
Scarlet fever:	
Portsmouth	1
Whooping cough:	
York	1

CAMP SEVIER ZONE, S. C.

Greenville:	
Chicken pox	3
Scarlet fever	1
Whooping cough	1
Greenville and vicinity:	
Influenza	431
Pneumonia	15
Paris Mountain Township:	
Measles	6

CAMP SHERIDAN ZONE, ALA.

Montgomery:	
Influenza	17
Pneumonia	5
United States Government Clinic:	
Chancroid	3
Gonorrhea	10
Syphilis	5

CAMP SHERMAN ZONE, OHIO.

Chillicothe:	Cases.
Influenza	19
Measles	1
Pneumonia, broncho	2
Scarlet fever	5
Ross County:	
Influenza	7
Union Township:	
Measles	1
United States Government Clinic:	
Gonorrhea	3
Syphilis	2

CAMP ZACHARY TAYLOR ZONE, KY. AND IND.

Chancroid:	
U. S. Government clinic	2
Diphtheria:	
Louisville	14
Gonorrhea:	
U. S. Government clinic	22
Venereal clinic, county jail	17
Influenza:	
Clark County	11
Jefferson County	94
Louisville	83
Pneumonia:	
Louisville	5
Scarlet fever:	
Jefferson County	1
Louisville	1
Smallpox:	
Louisville	1
Syphilis:	
U. S. Government clinic	24
Venereal clinic, county jail	10
Tuberculosis, pulmonary:	
Louisville	10

TIDEWATER HEALTH DISTRICT, VA.

Hampton:	
Scarlet fever	1
Newport News:	
Chicken pox	1
Erysipelas	1
Gonorrhea	15
Influenza	23
Measles	3
Pneumonia	1
Smallpox	1
Syphilis	3
Phoebus:	
Measles	1

CAMP TRAVIS ZONE, TEX.

San Antonio:	
Gonorrhea	9
Influenza	133
Malaria	1
Measles	1
Mumps	2
Pneumonia	18
Syphilis	5
Tuberculosis	4
Typhoid fever	1

CAMP UPTON ZONE, N. Y.

Pneumonia:	Cases.
Brook Haven	1
Riverhead	1

VANCOUVER ZONE, WASH.

Diphtheria	3
Influenza	109
Mumps	1
Tuberculosis, pulmonary	1

CAMP WADSWORTH ZONE, S. C.

Chicken pox:	
Arkwright	1
Gonorrhea:	
Spartanburg	5
Influenza:	
Arcadia	2
Beaumont Mills	10
Converse	1
Fairforest	2
Saxon Mills	3
Spartanburg	135
Measles:	
Drayton	1
Spartanburg	3
Meningitis:	
Fairforest	1
Pneumonia:	
Fairforest	2
Spartanburg	1
Smallpox:	
Fairforest	1

CAMP WHEELER ZONE, GA.

Bibb County:	
Influenza	4
East Macon:	
Influenza	5
Macon:	
Chicken pox	6
Influenza	43
Measles	2
Pneumonia	8
Smallpox	1
Whooping cough	3

WILMINGTON SANITARY DISTRICT, N. C.

Chicken pox:	
Wilmington	3
Diphtheria:	
East Wilmington	1
Influenza:	
Cape Fear Township, rural	2
East Wilmington	2
Mason Boro Township, rural	1
Oleander	6
Sea Gate	2
Wilmington	309
Measles:	
Wilmington	1
Pneumonia:	
East Wilmington	1
Wilmington	16
Tuberculosis:	
Wilmington	1
Typhoid fever:	
Wilmington	2

DISEASE CONDITIONS AMONG TROOPS IN THE UNITED STATES.[1]

Six Months Ended December 27, 1918.

The following data were compiled in the office of the Surgeon General, United States Army, from weekly telegraphic reports:

Annual admission rate per 1,000 (disease only):	
All troops	1,477.12
Divisional camps	1,593.91
Cantonments	1,651.59
Departmental and other troops	1,199.52
Average noneffective rate per 1,000 on days of reports:	
All troops	51.75
Divisional camps	62.93
Average noneffective rate per 1,000 on days of reports—Continued.	
Cantonments	56.25
Departmental and other troops	41.62
Annual death rate per 1,000 (disease only):	
All troops	32.15
Divisional camps	29.90
Cantonments	36.69
Departmental and other troops	27.82

Annual admission rate for special diseases reported during 6 months ended Dec. 27, 1918.

Camp.	Pneumonia.	Dysentery.	Malaria.	Venereal.	Influenza.	Measles.	Meningitis.	Scarlet fever.	Annual death rate (disease only).	Annual admission rate per 1,000 (disease only).	Average noneffective per 1,000 on days of reports.
Beauregard	147.2	7.50	24.65	216.0	527.2	45.2	2.7	0.0	55.0	2,124.4	78.2
Bowie	170.5	2.16	5.84	803.2	980.5	3.8	0.6	0.2	35.4	2,622.7	58.3
Cody	35.0	0.32	1.13	110.8	487.1	21.8	0.3	8.1	40.6	983.4	46.6
Forrest	68.0	0.0	0.0	136.0	549.9	34.0	0.0	0.0	39.3	2,046.8	51.5
Fremont	52.3	0.98	0.61	49.3	25.5	29.2	0.3	0.0	20.4	897.7	44.2
Greene	125.7	0.33	0.13	321.2	792.7	10.4	2.8	0.1	48.8	1,676.2	58.2
Greenleaf	19.5	1.02	2.96	52.9	608.8	34.7	1.1	1.0	32.3	1,293.0	50.1
Hancock	95.5	0.0	2.84	129.3	466.4	27.7	0.6	25.1	37.2	1,540.0	59.3
Kearny	83.2	0.0	1.93	102.2	464.3	12.9	0.5	0.7	18.0	1,073.0	38.5
Logan	117.4	0.0	15.26	178.8	652.3	11.7	1.3	0.1	21.5	2,133.0	62.1
MacArthur	48.7	0.56	2.53	158.8	780.0	47.0	0.4	0.4	19.8	1,756.3	66.3
McClellan	131.0	0.0	4.82	91.6	448.3	45.9	1.7	0.2	29.5	1,708.4	66.5
Sevier	119.8	0.0	13.6	70.9	431.9	43.8	3.3	0.8	38.5	1,454.5	56.1
Shelby	45.3	2.74	21.3	106.7	254.1	52.6	0.5	0.3	9.4	1,667.6	69.8
Sheridan	66.7	0.0	2.64	222.9	477.7	52.4	0.3	0.3	19.6	1,881.7	56.1
Wadsworth	84.7	0.0	2.7	570.3	65.1	14.8	0.5	0.5	22.2	1,683.5	57.5
Wheeler	104.8	0.23	8.17	89.9	9.3	1.9	0.8	0.0	23.0	1,243.0	40.7
Custer	150.4	0.18	0.0	194.5	516.4	5.3	0.5	1.3	42.2	1,381.6	34.0
Devens	171.9	0.05	0.85	75.6	760.3	24.7	1.8	0.6	46.2	1,715.6	57.5
Dix	117.0	0.57	2.48	546.2	291.0	8.7	1.1	0.9	41.8	1,605.5	46.0
Dodge	67.2	0.06	0.63	250.0	645.5	53.0	0.6	1.8	50.5	1,993.2	90.3
Eustis	40.8	0.9	11.1	118.7	697.7	18.5	0.2	0.9	33.1	1,454.9	36.3
Funston	102.6	0.0	0.6	140.5	602.8	45.7	1.0	4.5	43.5	1,400.5	46.6
Gordon	64.6	0.0	8.04	191.9	518.3	53.5	1.2	0.1	15.9	2,282.1	75.7
Grant	147.1	0.0	1.14	44.7	514.5	7.8	0.2	1.9	50.0	1,029.6	29.2
Humphreys	169.3	0.87	1.96	62.9	744.7	23.8	1.5	0.0	57.6	1,469.8	45.1
Jackson	67.2	0.15	2.74	299.9	406.2	40.0	2.8	0.3	23.5	1,391.9	57.1
Johnston	51.9	0.0	9.75	137.4	207.9	37.4	0.9	0.2	17.1	1,180.7	38.5
Las Casas	87.8	0.0	24.37	49.7	349.5	83.1	0.0	0.0	17.5	2,004.8	53.4
Lee	75.6	0.5	0.5	82.5	549.5	28.5	0.8	0.1	31.2	1,352.6	60.1
Lewis	128.1	0.06	1.15	176.5	194.9	23.9	0.9	2.3	12.8	1,733.7	59.7
Meade	150.7	0.34	2.03	189.2	486.4	23.9	1.5	0.4	42.3	1,302.3	38.6
Pike	50.6	0.0	12.73	438.7	638.3	85.6	2.0	0.5	25.7	3,300.7	72.9
Sherman	178.1	0.0	0.83	103.1	330.2	30.0	0.9	0.7	68.6	1,588.0	60.7
Taylor	120.6	0.0	0.0	61.7	417.9	55.3	3.1	2.5	39.9	1,678.6	61.5
Travis	184.5	2.51	5.54	109.3	500.7	5.9	0.7	0.2	18.6	2,756.4	85.1
Upton	96.8	0.12	0.45	270.8	647.1	11.4	0.3	0.3	28.4	1,455.3	53.2
Northeastern Department	23.1	0.0	0.87	72.9	283.3	4.1	0.8	0.2	25.7	1,199.1	37.2
Eastern	32.1	0.3	1.29	74.0	345.6	6.9	0.3	0.2	18.2	976.5	29.3
Southeastern	81.4	1.32	13.4	141.5	841.7	23.1	0.3	0.3	27.1	2,065.8	58.4
Central	82.9	0.43	0.75	58.6	699.0	6.2	0.3	3.5	30.8	1,746.4	46.9
Southern	54.2	1.71	3.23	69.4	422.5	3.0	0.3	0.6	20.2	1,340.4	45.0
Western	51.3	0.75	0.30	58.2	325.4	9.4	1.2	1.1	25.5	999.8	32.4
Aeronautics	46.8	0.33	3.26	53.1	355.0	4.1	0.2	1.2	17.7	1,217.5	43.7

[1] Including Porto Rico.

Annual death rate per 1,000 (disease only), by causes, for the six months ended Dec. 27, 1918.

Pneumonia	28.558	Scarlet fever	0.016
Influenza	1.513	Typhoid fever	.051
Meningitis	.422	Dysentery	.009
Empyema	.149	Other diseases	.966
Tuberculosis	.383	Total	32.152
Septicemia	.064		
Measles	.021		

Annual admission rate per 1,000 for special diseases, six months ended Dec. 27, 1918.

Disease.	All troops in United States, 1917.	All troops in United States.	Departmental and other troops.	Divisional camps.	Cantonments.
Pneumonia	15.18	85.18	48.89	87.51	113.48
Dysentery	.87	.63	.94	.88	.27
Malaria	7.46	3.75	2.93	6.43	1.67
Venereal	113.82	150.62	84.80	182.11	189.89
Paratyphoid	.02	.01	.01	.006	.02
Typhoid	.41	.28	.27	.39	.26
Measles	85.15	24.70	10.64	30.25	33.62
Meningitis	1.74	.97	.57	1.05	1.27
Scarlet fever	3.52	1.65	1.21	3.51	1.18
Influenza	57.72	452.02	385.01	449.47	507.37

Week Ended January 17, 1919.

The following data are taken from telegraphic reports received in the office of the Surgeon General of the United States Army for the week ended January 17, 1919. Reports from the American Expeditionary Forces are delayed in transmission, and the "current week" for troops in the American Expeditionary Forces is not the same period as "current week" for troops in the United States.

	Current week.	Last week.
Annual admission rate per 1,000 (all causes):		
All troops in United States	1,418.29	1,515.56
American Expeditionary Forces	873.70	887.39
Annual admission rate per 1,000 (disease only):		
All troops in United States	1,197.54	1,239.29
American Expeditionary Forces	719.22	733.05
Noneffective rate per 1,000 on day of report:		
All troops in United States	54.22	50.31
American Expeditionary Forces	56.85	63.96
Annual death rate per 1,000 (all causes):		
All troops in United States	16.73	14.40
American Expeditionary Forces	15.68	30.17
Annual death rate per 1,000 (disease only):		
All troops in United States	15.66	13.28
American Expeditionary Forces	7.82	7.76

Cases of special diseases reported during the week ended Jan. 17, 1919.

Camp.	Pneumonia.	Dysentery.	Malaria.	Venereal diseases.		Influenza.	Measles.	Meningitis.	Scarlet fever.	Annual admission rate per 1,000 (disease only).	Noneffective per 1,000 on day of report.
				Total.	New infections.						
Beauregard	7	----	5	24	.....		4	----	.....	1,882.17	50.69
Bowie	8	----	----	70	12	5	5	----	.....	2,124.39	72.20
Cody	----	----	----	1	.....	10	----	----	2	593.95	58.95
Fremont	6	----	----	2	.....	3	----	----	.....	1,862.20	132.34
Greene	4	----	----	25	.....	9	1	----	.....	810.04	55.09
Greenleaf	----	----	----	2	.....	----	----	----	.....	738.69	45.20
Hancock	77	----	1	41	7	95	1	----	2	1,694.72	86.80
Kearny	14	----	----	24	8	45	----	----	.....	1,190.40	28.10
Logan	9	----	1	16	.....	34	8	----	.....	818.24	47.85
MacArthur	8	----	----	5	.....	9	5	1	2	948.23	60.57
McClellan	56	----	----	14	3	82	3	----	.....	2,325.37	71.12
Sevier	2	----	----	17	4	21	----	----	.....	1,248.31	56.41
Sheridan	5	----	----	10	.....	----	----	1	.....	1,107.38	50.30
Shelby	6	----	----	46	22	21	1	----	.....	1,941.18	71.76
Wadsworth	1	----	----	8	.....	----	4	----	.....	565.77	41.04
Wheeler	2	----	----	3	.....	----	----	----	.....	1,017.9	157.8
Custer	7	----	----	11	6	----	6	----	6	1,027.0	31.98
Devens	9	----	----	30	6	31	2	1	1	868.12	46.20
Dix	8	----	----	21	.....	37	2	----	.....	1,153.82	71.99
Dodge	30	----	----	27	10	28	2	----	7	1,555.35	72.51
Eustis	----	----	----	3	.....	28	1	----	.....	1,644.48	50.02
Funston	18	----	----	18	.....	38	8	----	46	1,111.87	45.38
Gordon	8	----	----	19	.....	31	2	----	.....	1,204.02	51.94
Grant	21	----	----	12	.....	18	8	----	.....	639.06	45.06
Humphreys	12	----	----	14	2	38	8	----	.....	854.60	30.78
Jackson	48	----	----	48	.....	126	18	1	2	1,285.99	62.73
J. E. Johnston	3	----	----	16	.....	17	----	----	1	948.86	50.46
Henry Knox	1	----	----	2	.....	----	----	----	.....	1,312.69	29.84
Las Casas	1	----	4	3	.....	----	----	----	.....	1,696.49	56.84
Lee	1	----	----	24	12	99	5	1	4	1,041.63	63.59
Lewis	49	----	----	38	7	54	1	----	1	1,633.33	59.98
Meade	7	----	----	23	8	23	7	1	9	912.75	29.37
Pike	19	----	1	21	.....	37	----	----	1	2,185.21	88.0
Sherman	8	----	----	22	.....	14	5	----	1	1,049.23	88.57
Taylor	4	----	----	21	6	4	1	----	1	1,364.14	92.87
Travis	8	5	----	18	.....	69	14	1	.....	3,031.71	84.89
Upton	1	----	----	43	.....	6	2	1	.....	1,886.23	83.14
Northeast Department	----	----	----	7	4	9	----	----	5	951.21	34.49
Eastern Department	2	----	----	29	6	63	2	----	.....	917.14	24.11
Southeastern Department	5	----	2	11	.....	69	13	----	.....	1,218.23	32.89
Central Department	11	----	----	1	.....	13	----	----	3	1,712.94	35.76
Southern Department	23	----	3	87	3	181	1	----	.....	1,118.36	46.10
Western Department	3	----	----	5	1	29	----	----	.....	597.24	16.69
Aviation camps	141	----	1	67	.....	275	4	----	2	1,254.06	48.05
Ports of embarkation:											
Hoboken	16	----	----	10	.....	109	5	1	7	1,316.48	148.53
Newport News	23	1	----	196	7	28	9	----	4	2,178.04	132.21
Alcatraz, Disciplinary Barracks	----	----	----	----	----	----	----	----	.....	474.16	18.23
Leavenworth, Disciplinary Barracks	----	----	----	1	.....	----	4	----	.....	1,880.6	49.54
Jefferson Barracks	----	----	----	4	4	13	----	----	.....	1,063.93	49.45
Columbus Barracks	----	----	----	4	3	----	----	----	.....	1,016.65	54.30
Fort Logan	----	----	----	5	3	----	----	----	.....	1,117.83	46.17
Fort McDowell	1	----	----	4	.....	5	----	----	.....	1,444.44	50.50
Fort Sill	1	----	----	22	22	43	1	----	1	450.44	24.20
Fort Slocum	1	----	----	7	4	----	----	----	.....	576.55	34.84
Fort Thomas	----	----	----	1	1	----	----	----	.....	1,009.70	51.31
West Point	----	----	----	----	----	----	----	----	.....	1,114.89	23.08
Arsenals	1	----	----	20	.....	23	7	----	1	1,096.83	40.65
Miscellaneous small stations	6	----	----	13	.....	5	22	----	1	1,036.19	25.31
Total	702	6	18	1,233	171	1,897	192	9	110	1,197.54	54.2

Number of deaths and annual rates per 1,000 at large camps in United States, week ended Jan. 17, 1919.

Camp.	Strength.	Deaths.		Annual rate, deaths per 1,000.	
		All causes.	Disease only.	All causes.	Disease only.
Beauregard	10,837	1	1	4.80	4.80
Bowie	5,997	2	2	17.34	17.34
Cody	2,714	1	1	19.15	19.15
Fremont	2,569	0			
Greene	6,291	1	0	8.26	
Greenleaf	2,323	0			
Hancock	14,025	27	27	100.14	100.14
Kearny	14,595	2	2	7.28	7.28
Logan	10,744	4	4	19.36	19.36
MacArthur	6,471	5	5	40.17	40.17
McClellan	17,421	8	8	23.88	23.88
Sevier	6,665	1	1	7.80	7.80
Shelby	11,372	0			
Sheridan	6,563	0			
Wadsworth	6,066	0			
Wheeler	2,452	0			
Custer	28,817	2	2	3.60	3.60
Devens	23,729	4	3	8.76	6.57
Dix	23,390	4	3	8.89	6.67
Dodge	20,168	5	5	12.89	12.89
Eustis	4,838	1	1	10.74	10.74
Funston	35,447	9	8	13.20	11.74
Gordon	14,901	4	4	13.95	13.95
Grant	23,191	5	4	11.21	8.97
Humphreys	11,502	2	2	9.04	9.04
Jackson	20,425	10	10	25.45	25.45
J. E. Johnston	4,439	2	2	23.4	23.4
Henry Knox	7,170	0			
Las Casas	2,023	1	1	25.70	25.70
Lee	25,411	1	1	2.04	2.04
Lewis	29,649	2	2	3.5	3.5
Meade	28,776	5	5	9.03	9.03
Pike	15,428	10	10	33.72	33.72
Sherman	15,764	5	5	16.49	16.49
Taylor	16,014	1	1	3.24	3.24
Travis	18,732	1	0	2.7	
Upton	15,198	5	5	17.11	17.11
Northeastern Department	5,740	1	0	9.05	
Eastern Department	30,563	2	2	3.40	3.40
Southeastern Department	8,665	1	1	6.0	6.0
Central Department	4,250	2	2	24.47	24.47
Southern Department	44,598	11	11	12.82	12.82
Western Department	13,063	1	0	3.98	
Aviation camps	68,205	48	42	36.59	32.02
Ports of embarkation:					
Hoboken	25,240	8	8	16.48	16.48
Newport News	33,529	8	8	12.41	12.41
All others	130,328	65	4	25.94	1.59
Total	876,298	282	264	16.73	15.66

Annual admission rate per 1,000 for certain diseases.

Diseases.	Troops in United States.		American Expeditionary forces.	
	Current week.	Last week.	Current week.	Last week.
Pneumonia	41.65	31.65	25.24	26.77
Dysentery	0.35	0.05	1.03	1.46
Malaria	1.06	.05	.39	.13
Venereal	73.16	68.55	30.64	27.40
Paratyphoid	.0	.0	0.13	.16
Typhoid	.23	.39	1.53	1.27
Measles	11.39	10.15	1.98	5.13
Meningitis	.53	1.06	2.06	2.07
Scarlet fever	6.52	3.68	.78	.71
Influenza	112.56	105.39		

CURRENT STATE SUMMARIES.

Telegraphic Reports for Week Ended January 25, 1919.

Alabama.—State totals: Typhoid fever 7, smallpox 38, diphtheria 5, meningitis 2, influenza 2,553.

Arkansas.—Influenza: Izard about 300, Arkadelphia 125, Conway County 82, Lee 80, Ouachita 72, Madison 64, Bentonville 58, Bradley 60, Hempstead 57, Drew 40, St. Francis 39, Marianna 29, Faulkner 28, Rogers 28, Girard 25, Siloam Springs 20, Palestine 19, Hartford 16, Iuka 7 cases (death 1, pneumonia), Dermott 4 cases (deaths 2, pneumonia), other places 24. Malaria 29, smallpox 11, scarlet fever 2, diphtheria 8, typhoid fever 5, meningitis 1, tuberculosis 9, measles 13, pellagra 1.

California.—Influenza: Total cases reported during week 9,800 (total from beginning of epidemic to Jan. 28, 290,100). Marked decrease in number of cases throughout entire State. Fifteen cases of smallpox, distributed as follows: Long Beach 4, Monterey County 1, Watsonville 5, Santa Cruz County 1, Berkeley 2, San Francisco 2. Two cases poliomyelitis—1 San Francisco,1 Oakland. One case cerebrospinal meningitis at San Francisco.

Connecticut.—Cerebrospinal meningitis, Griswold 1. Influenza, total for State 863 cases.

Florida.—State totals: Typhoid fever 6, malaria 5, measles 36, scarlet fever 4, diphtheria 10, influenza 309, chicken pox 8, meningitis 2, pneumonia 7. Influenza: Panama City 170. Meningitis: De Soto 1, Gadsden 1.

Illinois.—Diphtheria: State 186, of which in Chicago 140. Scarlet fever: State 91, of which in Chicago 57, Quincy 6. Smallpox: State 84, of which in Elgin 8, Alma 8, Salem 6, Normal 6, Peoria 8, Rock Island 12, Pekin 7, Chicago 13. Meningitis: Chicago 6, Jerseyville 1. Poliomyelitis: Chicago 1. Pneumonia: State 488, of which in Chicago 452. Gonorrhea: State 64, of which in Chicago 56. Syphilis: State 38, of which in Chicago 35. Recrudescence of influenza noted in following Illinois communities: Flora city 36 cases, Lamotte and Prairie Townships (Crawford County) 45 and 37, respectively, St. Elmo 22, Ora Township (Jackson County) 23, Jerseyville 36, Rosedale Township (Jersey County) 20, Compton 20, Oran Township (Logan County) 33, Brighton 21, Salt Creek Township (Mason County) 25, Harvard 23, Pinckneyville precinct (Perry County) 45, Belleville 30. Total new cases of influenza 3,564, against 3,506 for preceding week.

Indiana.—Influenza: State 207 cases. Syphilis 16, gonorrhea 23. Typhoid fever: Epidemic at Marengo, Crawford County. Diphtheria: Lake County 1, Laporte 1, Howard 1, Wayne 1, Grant 1, Dekalb 1, Kosciusko 4.

Iowa.—Chancroid: Sioux City 6. Diphtheria: Des Moines 2, Dubuque 4, Gladbrook 1, Mount Pleasant 1, Ottumwa 1. Gonorrhea: Burlington 5, Cedar Rapids 7, Davenport 7, Fort Dodge 2, Guthrie Center 1, Muscatine 1, Sioux City 57, Williamsburg 1. Mumps: Davenport 1. Scarlet fever: Baxter 1, Burlington 1, Council Bluffs 2, Davenport 1, Des Moines 9, Goodell 1, Iowa Falls 1, New London 1, Rowan 1. Smallpox: Cedar Rapids 3, Council Bluffs 8, Des Moines 2, Mason City 7. Syphilis: Davenport 1, Dubuque 1, Fort Dodge 2, Sioux City 6. In rural districts of following counties. Chicken pox: Allamakee 2. Diphtheria: Kossuth 1, Tama 1. Gonorrhea: Tama 1. Scarlet fever: Hancock 2, Pocahontas 1. Smallpox: Buchanan 1, Monona 1. Influenza: Reported in State, 525 cases.

Kansas.—Meningitis: Fort Scott 1. State totals: Influenza 3,944, typhoid fever 3, smallpox 16, diphtheria 20, scarlet fever 23. Influenza: In cities of over 10,000 population; Atchison 10, Coffeyville 47, Hutchinson 22, Independence 27, Kansas City 58, Lawrence 12, Leavenworth 10, Parsons 38, Pittsburg 41, Topeka 162, Wichita 139.

Louisiana.—State totals: Typhoid fever 5, meningitis 5, diphtheria 14, smallpox 21, scarlet fever 2, influenza 7,298. Influenza by parishes: East Baton Rouge 443, St. Landry 341, Lafayette 225, Tangipahoa 219, Jefferson 217, St. James 210, La Salle 208, Avoyelles 204, New Orleans 1,434.

Maine.—Anthrax: Island Falls 1. Conjunctivitis: Augusta 1. Diphtheria: Bangor 1, Bucksport 1, Freeport 1, Livermore 1. German measles: Portland 1. Gonorrhea: Bath 7, Portland 2, Westbrook 1, Dover 1, Sanford 1, Camden 1. Measles: Gardiner 1. Mumps: Stonington 7. Scarlet fever: Portland 2, Norway 3, Castle Hill 1, Belfast 1, Cumberland 4, Westbrook 1. Smallpox: Bangor 1. Syphilis: Foxcroft 1, Portland 1, Paris 1, Norway 1, Bath 1. Tuberculosis: Eight cases. Whooping cough: Robbinston 8, Baileyville 4, York 1. Influenza: Augusta 39, Westbrook 17, Portland 58, Deer Isle 51, Stacyville 21, Moscow 52, scattered cases 157.

Massachusetts.—Unusual prevalence: Typhoid fever: Lawrence 9. Measles: Leominster 50.

Michigan.—Influenza: Bay City 124, Pontiac 166, Saginaw 184, Detroit 306; totals for State, 4,160 cases, 160 deaths.

Minnesota.—Smallpox (new foci): Chippewa County, Clara City village, 1; Norman County, Hendrum Township, 12; Olmsted County, Rochester, 1; Polk County, Queen Township, 1; Rice County, Faribault, 1. Fifty-two syphilis, 94 gonorrhea, 3 chancroid, reported since January 20.

New Jersey.—Influenza: 3,168 cases. Pneumonia: 446 cases.

New York.—Typhoid fever 27, of which in Mechanicsville 10; diphtheria, 200; scarlet fever, 126; whooping cough, 49; smallpox, 3,

of which in Buffalo 1, West Seneca town 1, Oswego 1; poliomyelitis 1; pneumonia, 302. Voluntary reports: Gonorrhea 23, syphilis 123.

North Carolina.—Whooping cough 59, measles 61, diphtheria 22, scarlet fever 21, septic sore throat 18, smallpox 52, chicken pox 20, infantile paralysis 1, typhoid fever 17, meningitis 1, ophthalmia neonatorum 2, broncho-pneumonia 73, lobar pneumonia 33. Influenza: By counties—Alamance 1, Chatham 5, Clay 3, Cleveland 175, Cumberland 246, Davidson 236, Gaston 39, Johnston 229, Lincoln 30, Montgomery 8, Pitt 118, Rockingham 22, Surry 6. City of Charlotte 155.

Ohio.—Smallpox: Gallipolis Epileptic Institution 8 cases. No other undue prevalence. Influenza recurring in some localities, though declining generally.

Oregon.—Influenza: Portland 719 cases (112 deaths); by counties—Clackamas 41, Columbia 21, Curry 1 death, Gilliam 5, Hood River 3, Jackson 4, Lane 2, Lincoln 25, Linn 30 (3 deaths), Marion 14, Multnomah 10, Polk 2, Tillamook 2, Wasco 26 (3 deaths), Washington 10.

Vermont.—Little change in influenza; 1,038 cases reported from 49 towns.

Virginia.—Smallpox: Charlotte County 1, Albemarle 1, Accomac 1, Surry 2, Fauquier 2. Influenza: State total 881 cases.

Washington.—No unusual outbreak of disease. Influenza generally on decrease throughout State; slightly on increase in Tacoma. Thirteen cases smallpox reported from Yakima County.

RECIPROCAL NOTIFICATION.

Minnesota.

Cases of communicable diseases referred during December, 1918, to other State health departments by Department of Health of the State of Minnesota.

Disease and locality of notification.	Referred to health authority of—	Why referred.
Smallpox:		
Minneapolis Health Department, Hennepin County.	Minot, Ward County, N. Dak.	Man, wife and baby exposed to smallpox while visiting in Minneapolis.
Tuberculosis:		
Mayo Clinic, Rochester, Olmsted County.	Little Rock, Pulaski County, Ark.; Los Angeles, Los Angeles County, Cal.; Ouray, Ouray County, Colo.; Des Moines, Polk County, Iowa (2 cases); Fort Dodge, Webster County, Iowa; Cedarvals, Chautauqua County, Kans.; Wichita, Sedgwick County, Kans.; Wakefield, Gogebic County, Mich.; Bessemer, Gogebic County, Mich.; Bozeman, Gallatin County, Mont.; Kathryn, Barnes County, N. Dak.; Oxford, Marquette County, Wis.; Antigo, Langlade County, Wis.; Sault Ste. Marie, Ontario, Canada.	9 moderately advanced, 3 advanced, 1 incipient, 2 (stage of disease not given) cases left Mayo clinic for homes.
Thomas Hospital, Minneapolis, Hennepin County.	Hanlontown, Worth County, Iowa; Northwood, Worth County, Iowa.	2 open cases left hospital for homes.
Pokegama Sanatorium, Pine County.	Mason City, Cerro Gordo County, Iowa.	1 open case left sanatorium for home.

CHANCROID.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases.		Cases.
Camp Joseph E. Johnston zone, Fla	3	Camp Sheridan zone, Ala	3
Muscle Shoals sanitary district, Ala	21	Camp Zachary Taylor zone, Ky. and Ind	2

CEREBROSPINAL MENINGITIS.

State Reports for October, November, and December, 1918.

Place.	New cases reported.
California (October):	
Contra Costa County—	
Richmond	1
Kings County—	
Hanford	1
Los Angeles County	1
Los Angeles	1
Watts	1
San Francisco	2
San Joaquin County—	
Stockton	1
San Mateo County	1
San Mateo	1
Shasta County—	
Redding	1
Solano County	1
Total	12
Illinois (December):	
Cook County—	
Chicago	5
Franklin County—	
Orient	1
Lake County—	
Highland Park	1
Peoria County—	
Hanna City	1
Peoria	1
Washington County—	
Nashville	1
Will County—	
Joliet	1
Total	11
Iowa (December):	
Butler County	1
Kansas (December):	
Barton County—	
Great Bend	1
Butler County—	
Benton	2
Clay County—	
Clay Center	1
Cowley County—	
Arkansas City	1
Atlanta (R. D.)	1
Geary County—	
Junction City	5
Greenwood County—	
Eureka	1
Jackson County—	
Soldier (R. D.)	1
Marion County—	
Marion (R. D.)	1
Morton County—	
Elkhart	1
Nemaha County—	
Centralia (R. D.)	1
Total	16
Louisiana (December):	
Bienville Parish	1
Lincoln Parish	2
Louisiana (December)—Continued.	
Orleans Parish	2
Rapides Parish	6
West Feliciana Parish	1
Total	12
Maryland (December):	
Baltimore	5
Anne Arundel County	1
Baltimore County—	
Bay View Hospital	1
Total	7
Massachusetts (December):	
Berkshire County—	
Great Barrington (town)	2
Bristol County—	
Fall River	1
Essex County—	
Haverhill	1
Salem	2
Hampden County—	
Westfield (town)	1
Middlesex County—	
Arlington (town)	1
Camp Devens	2
Cambridge	2
Malden	1
Newton	1
Norfolk County—	
Brookline (town)	1
Suffolk County—	
Boston	4
Winthrop (town)	1
Worcester County—	
Northborough (town)	1
Total	21
Minnesota (December):	
Hennepin County—	
Minneapolis	2
St. Louis County—	
Duluth	1
Total	3
Nebraska (October):	
Douglas County	1
Thayer County	1
Total	2
Nebraska (November):	
Gage County	1
New Jersey (December):	
Bergen County	2
Essex County	1
Hudson County	1
Middlesex County	1
Passaic County	2
Total	7

CEREBROSPINAL MENINGITIS—Continued.

State Reports for October, November, and December, 1918—Continued.

Place.	New cases reported.
North Carolina (December):	
Catawba County	1
Durham County	2
Forsyth County	1
Mecklenburg County	1
New Hanover County	3
Total	8
Ohio (December):	
Athens County	1
Belmont County	2
Clinton County	1
Cuyahoga County	1
Erie County	1
Fairfield County	1
Franklin County	1
Hamilton County	1
Morgan County	1
Richland County	1
Warren County	1
Total	12
Pennsylvania (December):	
Allegheny County	1
Armstrong County	1
Berks County	1
Delaware County	1
Fayette County	1
Pennsylvania (December)—Continued.	
Lycoming County	2
Philadelphia County	6
Total	13
Rhode Island (December):	
Providence	1
South Carolina (December):	
Richland County	1
Virginia (December):	
Albemarle County	1
Frederick County	1
James City County—	
Williamsburg	1
Pittsylvania County	1
Prince George County	9
Roanoke County—	
Roanoke	1
Rockingham County	2
Spottsylvania County—	
Fredericksburg	1
Washington County—	
Abingdon	1
Wise County—	
Exeter	1
Wythe County—	
Ivanhoe	1
Total	20

City Reports for Week Ended Jan. 11, 1919.

Place.	Cases.	Deaths.
Baltimore, Md.	2	.....
Beaumont, Tex.	.....	1
Birmingham, Ala.	1	.....
Boston, Mass.	1	2
Bridgeport, Conn.	.....	1
Charlotte, N. C.	.....	1
Chicago, Ill.	2	.....
Little Rock, Ark.	2	.....
Louisville, Ky.	.....	2
Malden, Mass.	1	1
Milwaukee, Wis.	3	3
Minneapolis, Minn.	1	1
Nashua, N. H.	1	.....
Newark, N. J.	1	1
New Orleans, La.	1	.....
New York, N. Y.	11	7
Passaic, N. J.	1	.....
Philadelphia, Pa.	2	.....
Pittston, Pa.	1	.....
Providence, R. I.	1	.....
St. Louis, Mo.	1	.....
San Francisco, Cal.	2	.....
Southbridge, Mass.	1	.....
Syracuse, N. Y.	1	1
Watervliet, N. Y.	.....	1
Winthrop, Mass.	.....	1

DIPHTHERIA.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases.
Camp Bowie zone, Tex.	1
Camp Dix zone, N. J.	1
Camp Funston zone, Kans.	1
Gulfport health district, Miss.	1
Camp Hancock zone, Ga.	1
Fort Leavenworth zone, Kans.	6
Camp MacArthur zone, Tex.	1
Camp Merritt zone, N. J.	1
Muscle Shoals sanitary district, Ala.	1
Fort Oglethorpe zone, Ga. and Tenn.	1
Camp Zachary Taylor zone, Ky. and Ind.	14
Vancouver zone, Wash.	3
Wilmington sanitary district, N. C.	1

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 214.

GONORRHEA.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases.
Camp Beauregard zone, La.	1
Camp Bowie zone, Tex.	10
Camp Doniphan zone, Okla.	2
Camp Funston zone, Kans.	2
Camp Greene zone, N. C.	8
Gulfport health district, Miss.	3
Camp Jackson zone, S. C.	3
Camp Joseph E. Johnston zone, Fla.	19
Camp Lee zone, Va.	3
Camp McClellan zone, Ala.	4
Muscle Shoals sanitary district, Ala.	20
Fort Oglethorpe zone, Ga. and Tenn.	14
Picric Acid Plant zone, Ga.	5
Camp Pike zone, Ark.	7
Portsmouth and Norfolk County health district, Va.	3
Camp Sheridan zone, Ala.	10
Camp Sherman zone, Ohio	3
Camp Zachary Taylor zone, Ky. and Ind.	39
Tidewater health district, Va.	15
Camp Travis zone, Tex.	9
Camp Wadsworth zone, S. C.	5

INFLUENZA.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases.
Camp Beauregard zone, La.	148
Camp Bowie zone, Tex.	6
Bremerton zone, Wash.	129
Charleston sanitary district, S. C.	449
Camp Devens zone, Mass.	9
Camp Eberts zone, Ark.	106
Fayetteville sanitary district, N. C.	195
Camp Funston zone, Kans.	37
Gas and Flame School zone, Ga. and Ala.	163
Gerstner Field zone, La.	40
Camp Greene zone, N. C.	35
Gulfport health district, Miss.	389
Camp Hancock zone, Ga.	287
Camp Humphreys zone, Va.	168
Camp Jackson zone, S. C.	726
Camp Joseph E. Johnston zone, Fla.	143
Fort Leavenworth zone, Kans.	28
Camp Lee zone, Va.	27
Camp Lewis zone, Wash.	5
Camp MacArthur zone, Tex.	7
Camp McClellan zone, Ala.	15
Camp Merritt zone, N. J.	92
Muscle Shoals sanitary district, Ala.	80
Fort Oglethorpe zone, Ga. and Tenn.	30
Picric Acid Plant zone, Ga.	33
Camp Pike zone, Ark.	527
Camp Polk zone, N. C.	509
Portsmouth and Norfolk County health district, Va.	160
Portsmouth-Kittery sanitary district, N. H. and Me.	43
Camp Sevier zone, S. C.	431
Camp Sheridan zone, Ala.	17
Camp Sherman zone, Ohio	26
Camp Zachary Taylor zone, Ky. and Ind.	188
Tidewater health district, Va.	23
Camp Travis zone, Tex.	133
Vancouver zone, Wash.	109
Camp Wadsworth zone, S. C.	153
Camp Wheeler zone, Ga.	52
Wilmington sanitary district, N. C.	382

MALARIA.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases.
Camp Beauregard zone, La.	4
Camp Eberts zone, Ark.	4
Gulfport health district, Miss.	9
Muscle Shoals sanitary district, Ala.	1
Camp Travis zone, Tex.	1

State Reports for October, November, and December, 1918.

Place.	New cases reported.
California (October):	
Butte County	13
Chico	8
Gridley	8
Calaveras County	1
Angeles	2
Colusa County	1
Fresno County	1
Glenn County	1
Orland	1
Kern County	2
Los Angeles County—	
Los Angeles	1
Marin County—	
Fort McDowell	2
California (October)—Continued.	
Merced County	3
Placer County—	
Auburn	1
Sacramento County	1
San Diego County	7
San Diego	1
San Francisco	1
San Joaquin County	6
Stockton	2
Solano County—	
Benecia	2
Tehama County—	
Corning	1
Trinity County	2

MALARIA—Continued.

State Reports for October, November, and December, 1918—Continued.

Place.	New cases reported.
California (October)—Continued.	
Yolo County	2
Yuba County—	
Marysville	4
Total	74
Kansas (December):	
Wilson County—	
New Albany	1
Louisiana (December):	
Acadia Parish	1
De Soto Parish	1
East Baton Rouge Parish	1
Natchitoches Parish	1
Orleans Parish	1
Plaquemines Parish	1
Rapides Parish	20
St. Martin Parish	1
St. Tammany Parish	30
Tangipahoa Parish	3
Vermilion Parish	1
Vernon Parish	2
Total	63
Maryland (December):	
Charles County—	
Ironside, R. D	2
Calvert County—	
Solomons	2
Prince George County—	
Accokeek, R. D	1
Somerset County—	
Crisfield	1
Talbot County—	
St. Michaels	4
Total	10
Massachusetts (December):	
Hampden County—	
Springfield	1
Middlesex County	1
Suffolk County—	
Boston	1
Total	3
New Jersey (December):	
Bergen County	1
Essex County	1
Morris County	1
Passaic County	41
Total	44
Ohio (December):	
Ashland County	3
Columbiana County	1
Noble County	1
Portage County	1
Total	6
South Carolina (December):	
Marion County	5
York County	3
Total	8
Virginia (December):	
Caroline County	3
Chesterfield County	3
Dinwiddie County	4
Greenesville County	2
Emporia	5
Hanover County	1
Henrico County—	
Richmond	1
Isle of Wight County	12
James City County	3
King William County—	
West Point	2
Lancaster County	2
Lunenburg County	1
Kenbridge	1
Mecklenburg County—	
Boydton	1
Middlesex County	1
Nansemond County—	
Suffolk	2
Norfolk County	2
Northampton County	5
Northumberland County	4
Nottoway County—	
Burkeville	2
Crewe	1
Pittsylvania County—	
Java	2
Powhatan County	9
Princess Anne County	10
Prince George County	3
Hopewell	2
Richmond County	2
Roanoke County—	
Salem	2
Southampton County	1
Surry County	2
Sussex County	4
Stony Creek	2
York County	2
Total	99

City Reports for Week Ended Jan. 11, 1919.

During the week ended January 11, 1919, malaria was reported at Bayonne, N. J., High Point, N. C., Little Rock, Ark., and Richmond, Va., one case each.

MEASLES.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases.		Cases.
Camp Beauregard zone, La	2	Camp Pike zone, Ark	4
Camp Eberts zone, Ark	1	Camp Polk zone, N. C	5
Camp Funston zone, Kans	2	Portsmouth and Norfolk County health district, Va	2
Gulfport health district, Miss	1	Camp Sevier zone, S. C	6
Camp Humphreys zone, Va	1	Camp Sherman zone, Ohio	2
Camp Jackson zone, S. C	6	Tidewater health district, Va	4
Camp Joseph E. Johnston zone, Fla	31	Camp Travis zone, Tex	1
Camp Lee zone, Va	3	Camp Wadsworth zone, S. C	4
Camp Merritt zone, N. J	1	Camp Wheeler zone, Ga	2
Muscle Shoals sanitary district, Ala	19	Wilmington sanitary district, N. C	1
Picric Acid Plant zone, Ga	11		

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 214.

PELLAGRA.

State Reports for October and December, 1918.

Place.	New cases reported.	Place.	New cases reported.
California (October):		South Carolina (December):	
Los Angeles County—		Marion County	1
Los Angeles	1	York County	1
Riverside County—		Total	2
Banning	1		
San Bernardino County—		Virginia (December):	
San Bernardino	2	Campbell County—	
Total	4	Lynchburg	1
		Henrico County	1
Kansas (December):		Orange County	1
Shawnee County—		Powhatan County	1
Topeka State Hospital	1	Warwick County	2
		Total	6
Louisiana (December):			
De Soto Parish	1		
East Baton Rouge Parish	1		
Total	2		

City Reports for Week Ended Jan. 11, 1919.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Atlanta, Ga		1	Chelsea, Mass	4	
Billings, Mont	1		Galveston, Tex		1
Birmingham, Ala		2	Houston, Tex		1
Charleston, S. C		1	Raleigh, N. C		1

PNEUMONIA.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases.
Camp Beauregard zone, La.	1
Camp Bowie zone, Tex.	13
Bremerton zone, Wash.	5
Camp Eberts zone, Ark.	5
Fayetteville sanitary district, N. C.	24
Camp Funston zone, Kans.	6
Gas and Flame School zone, Ga. and Ala.	5
Gerstner Field zone, La.	1
Gulfport health district, Miss.	39
Camp Humphreys zone, Va.	2
Camp Jackson zone, S. C.	1
Camp Joseph E. Johnston zone, Fla.	2
Fort Leavenworth zone, Kans.	1
Camp Lee zone, Va.	1
Camp MacArthur zone, Tex.	9
Camp McClellan zone, Ala.	1
Camp Merritt zone, N. J.	13
Muscle Shoals sanitary district, Ala.	8
Fort Oglethorpe zone, Ga. and Tenn.	1
Picric Acid Plant zone, Ga.	3
Camp Pike zone, Ark.	51
Camp Sevier zone, S. C.	15
Camp Sheridan zone, Ala.	5
Camp Zachary Taylor zone, Ky. and Ind.	5
Tidewater health district, Va.	1
Camp Travis zone, Tex.	18
Camp Upton zone, N. Y.	2
Camp Wadsworth zone, S. C.	3
Camp Wheeler zone, Ga.	8
Wilmington sanitary district, N. C.	17

City Reports for Week Ended Jan. 11, 1919.

Place.	Cases.	Deaths.
Akron, Ohio	4	
Alameda, Cal.	1	1
Alexandria, La.	2	2
Atlantic City, N. J.	1	2
Attleboro, Mass.	5	5
Baltimore, Md.	25	29
Battle Creek, Mich.	5	
Belleville, N. J.	1	
Beverly, Mass.	6	
Binghamton, N. Y.	3	
Bloomfield, N. J.	5	
Bluefield, W. Va.	1	3
Boston, Mass.	98	30
Bridgeport, Conn.	1	7
Brookline, Mass.	2	
Brunswick, Ga.	1	1
Cambridge, Mass.	13	4
Camden, N. J.	5	
Canton, Ill.	1	
Centralia, Ill.	2	
Charleston, W. Va.	1	
Chicago, Ill.	473	103
Cleveland, Ohio	45	41
Columbia, S. C.	2	
Cranston, R. I.	7	7
Dayton, Ohio	3	3
Detroit, Mich.	18	73
Duluth, Minn.	8	3
Durham, N. C.	1	3
East Orange, N. J.	6	2
Elmira, N. Y.	5	2
Englewood, N. J.	1	2
Fall River, Mass.	14	
Findlay, Ohio	1	
Fitchburg, Mass.	13	3
Flint, Mich.	5	5
Fort Worth, Tex.	16	17
Framingham, Mass.	2	
Geneva, N. Y.	1	
Grand Rapids, Mich.	7	6
Greenwich, Conn.	8	4
Hackensack, N. J.	6	5
Hartford, Conn.	2	3
Haverhill, Mass.	25	7
Henderson, Ky.	5	3
Highland Park, Mich.	13	7
High Point, N. C.	5	3
Hoquiam, Wash.	2	
Hutchinson, Kans.	1	
Ithaca, N. Y.	1	1
Jamestown, N. Y.	9	2
Jersey City, N. J.	9	
Joplin, Mo.	1	
Kalamazoo, Mich.	4	4
Kansas City, Kans.	1	
Kansas City, Mo.	17	26
Kearny, N. J.	10	3
Lackawanna, N. Y.	13	3
Lakewood, Ohio	1	1
Lawrence, Mass.	5	3
Lincoln, Nebr.	1	
Little Rock, Ark.	26	3
Long Branch, N. J.	1	3
Los Angeles, Cal.	22	14
Lowell, Mass.	5	6
Ludington, Mich.	3	2
Lynn, Mass.	2	1
Manchester, Conn.	5	4
Manchester, N. H.	2	2
Manistee, Mich.	1	1
Manitowoc, Wis.	2	2
Marion, Ohio	6	
Melrose, Mass.	1	1
Middletown, N. Y.	3	2
Montclair, N. J.	9	3
Morgantown, W. Va.	2	1
Morristown, N. J.	3	4
Mount Vernon, N. Y.	12	3
Newark, N. J.	86	30
New Bedford, Mass.	3	1
Newburgh, N. Y.	4	4
Newburyport, Mass.	1	
Newport, Ky.	1	1
Newport, R. I.	6	1
Newton, Mass.	2	2
New York, N. Y.	652	519
Norfolk, Va.	1	3
North Attleboro, Mass.	2	1
Norwich, Conn.	1	1
Oak Park, Ill.	7	4
Pasadena, Cal.	6	1
Perth Amboy, N. J.	2	3
Philadelphia, Pa.	150	68
Piqua, Ohio	1	1
Plainfield, N. J.	2	2
Pontiac, Mich.	2	
Port Chester, N. Y.	5	1
Poughkeepsie, N. Y.	2	1
Richmond, Va.	2	6
Rochester, N. Y.	17	
Rome, N. Y.	2	
Saginaw, Mich.	1	9
Salem, Mass.	13	7
San Diego, Cal.	2	2
Sandusky, Ohio	3	2
San Francisco, Cal.	24	17

PNEUMONIA—Continued.

City Reports for Week Ended Jan. 11, 1919—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Sault Ste. Marie, Mich.	3	.....	Waterbury, Conn.	6	.....
Schenectady, N. Y.	1	.....	Watertown, Mass.	4	2
Sioux Falls, S. Dak.	10	7	Westfield, Mass.	1	1
Somerville, Mass.	6	4	West New York, N. J.	2	2
Springfield, Mass.	12	7	Wichita, Kans.	3	1
Stockton, Cal.	11	11	Wilmington, Del.	13	13
Toledo, Ohio.	4	3	Winston-Salem, N. C.	14	9
Trenton, N. J.	2	2	Yonkers, N. Y.	10	7
Utica, N. Y.	1	.....			

POLIOMYELITIS (INFANTILE PARALYSIS).

State Reports for October and December, 1918.

Place.	New cases reported.	Place.	New cases reported.
California (October):		Nebraska (October):	
Humboldt County	2	Buffalo County	1
San Francisco	2	Custer County	1
Santa Barbara County—		Total	2
Santa Barbara	2	New Jersey (December):	
Tulare County	1	Middlesex County	1
Total	7	North Carolina (December):	
Illinois (December):		Halifax County	1
Bureau County—		Randolph County	2
Arispie Township	1	Total	3
Morgan County—		Ohio (December):	
Meredosia precinct	1	Lucas County	1
Total	2	Pennsylvania (December):	
Iowa (December):		Allegheny County	1
Hamilton County	1	Philadelphia County	1
Kansas (December):		Total	2
Chautauqua County—		Virginia (December):	
Sedan (R. D.)	1	Augusta County—	
Pratt County—		Basic	1
Pratt	1	Lee County	1
Total	2	Nottoway County	1
Louisiana (December):		Roanoke County—	
Rapides Parish	2	Salem	1
Maryland (December):		Scott County	1
Baltimore County—		Total	5
Chesaco Park	1		
Massachusetts (December):			
Essex County—			
Haverhill	1		
Topsfield (town)	1		
Suffolk County—			
Chelsea	1		
Total	3		

City Reports for Week Ended Jan. 11, 1919.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.	1	.....	Newark, N. J.	1	.....
Chicago, Ill.	1	.....	Richmond, Va.	1	.....
Dallas, Tex.	1	.....	St. Louis, Mo.	1	.....
Milwaukee, Wis.	1	.....			

RABIES IN ANIMALS.

City Reports for Week Ended Jan. 11, 1919.

During the week ended January 11, 1919, rabies in animals was reported at Asheville, N. C.; Memphis, Tenn.; and San Antonio, Tex., 2 cases each.

SCARLET FEVER.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases.		Cases.
Camp Bowie zone, Tex	1	Camp Pike zone, Ark	7
Camp Funston zone, Kans	2	Portsmouth-Kittery sanitary district, N. H. and Me	1
Gas and Flame School zone, Ga. and Ala	1	Camp Sevier zone, S. C	1
Gulfport health district, Miss	2	Camp Sherman zone, Ohio	5
Camp Joseph E. Johnston zone, Fla	1	Camp Zachary Taylor zone, Ky. and Ind	2
Camp MacArthur zone, Tex	1	Tidewater health district, Va	1
Camp Merritt zone, N. J	4		
Fort Oglethorpe zone, Ga. and Tenn	1		

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 214.

SMALLPOX.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases.		Cases.
Camp Bowie zone, Tex	1	Picric Acid Plant zone, Ga	2
Gas and Flame School zone, Ga. and Ala	2	Camp Polk zone, N. C	1
Gerstner Field zone, La	35	Camp Zachary Taylor zone, Ky. and Ind	1
Camp Hancock zone, Ga	1	Tidewater health district, Va	1
Camp McClellan zone, Ala	2	Camp Wadsworth zone, S. C	1
Muscle Shoals sanitary district, Ala	2	Camp Wheeler zone, Ga	1

State Reports for October and December, 1918—Vaccination Histories.

Place.	Newcases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
California (October):						
Alameda County—						
Oakland	2			1	1	
Butte County—						
Chico	8				8	
Contra Costa County	32			1	31	
Fresno County	3				3	
Fresno City	1				1	
Glenn County	3			1	2	
Kern County	2				2	
Maricopa	1				1	
Kings County	1				1	
Los Angeles County	1				1	
Long Beach	1				1	
Los Angeles	4				4	
Napa County—						
Napa	1				1	
Orange County—						
Santa Ana	2			1	1	
San Diego County—						
San Diego	1				1	
San Francisco	3				3	
San Joaquin County	2				2	
Santa Clara County	1				1	
Palo Alto	2				2	
San Jose	2				2	

SMALLPOX—Continued.

State Reports for October and December, 1918—Vaccination Histories—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
California (October)—Continued.						
Shasta County—						
Redding	3				3	
Siskiyou County	6				6	
Dunsmuir	1				1	
Solano County—						
Benecia	8			1	7	
Vallejo	12			5	7	
Stanislaus County	2				2	
Total	105			10	95	
Kansas (December):						
Allen County—						
Iola	10				10	
Atchison County—						
Atchison	4				4	
Butler County—						
Latham (R. D.)	8			2	6	
Clay County—						
Clifton	1				1	
Crawford County—						
Girard (R. D.)	2				2	
Ellsworth County—						
Wilson (R. D.)	1				1	
Harvey County—						
Burrton	4				4	
Jewell County—						
Burr Oak (R. D.)	3				3	
Esbon (R. D.)	6				6	
Mankato	1				1	
Kingman County—						
Nashville (R. D.)	6				6	
Labette County—						
Parsons	3				3	
Logan County—						
Oakley	1				1	
Pratt County—						
Pratt	1				1	
Republic County—						
Belleville	5				5	
Munden	1			1		
Sedgwick County—						
Wichita	4				4	
Sumner County—						
Oxford	1				1	
Wyandotte County—						
Kansas City	5				5	
Total	67			3	64	
Maryland (December):						
Dorchester County—						
Cambridge	1				1	
Cambridge (R. D.)	1				1	
Washington County—						
Hagerstown	5				5	
Total	7				7	
Michigan (December):						
Branch County—						
Bronson	1			1		
Charlevoix County—						
Boyne City	1					1
Delta County—						
Escanaba	1					1
Genesee County—						
Fenton	2					2
Flint	1				1	

SMALLPOX—Continued.

State Reports for October and December, 1918—Vaccination Histories—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Michigan (December)—Contd.						
Gogebic County—						
Ironwood	2			1	1	
Gratiot County—						
Hamilton Township	3				3	
Huron County—						
Dwight Township	3				3	
Ingham County—						
Stockbridge Township	1				1	
Lansing	13				13	
Iron County—						
Crystal Falls	1					1
Jackson County—						
Jackson	2				2	
Kalamazoo County—						
Vicksburg	3				3	
Kalamazoo	1					1
Kalkaska County—						
Kalkaska	1				1	
Kent County—						
Grand Rapids	3				3	
Lenawee County—						
Adrian Township	4				2	2
Blissfield Township	1					1
Dover Township	1				1	
Franklin Township	2				2	
Palmyra Township	1				1	
Raisin Township	1					1
Riga Township	1				1	
Seneca Township	2					2
Blissfield	2				2	
Clayton	2			1	1	
Marquette County—						
Marquette	1				1	
Muskegon County—						
Muskegon Heights	4				4	
Oakland County—						
Pontiac	1			1		
Oceana County—						
Grant Township	1				1	
Saginaw County—						
Saginaw	1				1	
St. Joseph County—						
Fabius Township	1					1
Washtenaw County—						
Sharon Township	1				1	
Wayne County—						
Detroit	3				3	
Total	69			4	52	13
Minnesota (December):						
Anoka County—						
Anoka	1					1
Carlton County—						
Carlton	1				1	
Knife Falls Township	1			1		
Clearwater County—						
Popple Township	6				6	
Dakota County—						
Lakeville Township	1			1		
Dodge County—						
West Concord	9				9	
Freeborn County—						
Manchester Township	1				1	
Hennepin County—						
Minneapolis	26			6	20	
West Minneapolis	1				1	
Bloomington Township	6				6	

SMALLPOX—Continued.

State Reports for October and December, 1918—Vaccination Histories—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Minnesota (December)—Contd.						
Kanabec County—						
Whited Township	1				1	
McLeod County—						
Hutchinson	1				1	
Hassan Valley Township	1				1	
Marshall County—						
Warren	1				1	
Nobles County—						
Adrian	1				1	
Ottertail County—						
Perham	1				1	
Richville	3				3	
Polk County—						
Esther Township	2				2	
Ramsey County—						
St. Paul	93				93	
Renville County—						
Fairfax	1				1	
Rock County—						
Luverne	5			1	4	
Magnolia	1					1
Mound Township	8				8	
St. Louis County—						
Duluth	1		1			
Sibley County—						
Severence Township	1				1	
Wright County—						
Cokato Township	3				3	
Middleville Township	3				3	
Total	180		1	9	168	2
Ohio (December):						
Belmont County	3				2	1
Butler County	54		4	2	16	32
Clinton County	4					4
Coshocton County	22					22
Crawford County	6				1	5
Cuyahoga County	26				1	25
Defiance County	1					1
Fayette County	8					8
Franklin County	1				1	
Fulton County	1					1
Hamilton County	9				3	6
Hardin County	2					2
Harrison County	2					2
Highland County	1				1	
Hocking County	1				1	
Huron County	1					1
Jefferson County	9				8	1
Lake County	1					1
Lorain County	37		2		6	29
Lucas County	16				11	5
Marion County	10				1	9
Montgomery County	21				6	15
Muskingum County	7			1	1	5
Paulding County	6					6
Pike County	1					1
Portage County	1				1	
Preble County	1					1
Sandusky County	2					2
Scioto County	1				1	
Seneca County	2				2	
Stark County	1					1
Warren County	7				7	
Total	265		6	3	70	186

SMALLPOX—Continued.

State Reports for October, November, and December, 1918.

Place.	Cases.	Deaths.
Illinois (December):		
Bureau County—		
Concord Township	1	
Champaign County—		
Urbana	1	
Cook County—		
Chicago	3	
Hanover Township	1	
Christian County—		
Taylorville	3	
Cumberland County—		
Greene Township	1	
De Witt County—		
Rutledge Township	1	
Fulton County—		
Joshua Township	1	
Kane County—		
Elgin	57	
Elgin Township	1	
Knox County—		
Galesburg	2	
La Salle County—		
La Salle	1	
Logan County—		
Oran Township	1	
Madison County—		
Livingston	6	
Montgomery County—		
Schram City	20	
Morgan County—		
Jacksonville	5	
Jacksonville Precinct	1	
Peoria County—		
Peoria	3	
Perry County—		
St. Johns	1	
Rock Island County—		
Moline	55	
Shelby County—		
Richland Township	2	
St. Clair County—		
East St. Louis	4	
Tazewell County—		
Pekin	5	
Tremont Township	1	
Wayne County—		
Barnhill Township	1	
Total	178	
Iowa (December):		
Buena Vista County	1	
Butler County	3	
Carroll County	2	
Cerro Gordo County	5	
Clayton County	6	
Dallas County	2	
Des Moines County	6	
Hardin County	1	
Jasper County	2	
Linn County	6	1
Monona County	4	
Osceola County	7	
Polk County	10	
Pottawattamie County	21	
Story County	3	
Wapello County	2	
Washington County	3	
Webster County	2	
Total	86	1
Louisiana (December):		
Acadia Parish	15	
Allen Parish	2	
Beauregard Parish	6	
Calcasieu Parish	6	
Iberia Parish	1	
Jefferson Parish	1	
Lafayette Parish	1	
Louisiana (December)—Con.		
Natchitoches Parish	1	
Orleans Parish	3	
Ouachita Parish	1	
Rapides Parish	12	
Richland Parish	8	
St. Landry Parish	4	
Vermilion Parish	4	
Total	65	
Nebraska (October):		
Antelope County	1	
Box Butte County	1	
Butler County	6	
Cass County	1	
Chase County	1	
Custer County	1	
Dawes County	1	
Douglas County	95	
Franklin County	3	
Hooker County	1	
Lancaster County	7	
Madison County	3	
Nemaha County	2	
Nucholls County	13	
Red Willow County	3	
Sarpy County	1	
Saunders County	2	
Scotts Bluff County	1	
Seward County	8	
York County	1	
Total	152	
Nebraska (November):		
Butler County	2	
Cass County	2	
Colfax County	2	
Custer County	2	
Douglas County	28	
Garfield County	1	
Holt County	3	
Hooker County	3	
Lancaster County	23	
Madison County	1	
Nucholls County	10	
Scotts Bluff County	1	
Seward County	1	
Total	79	
New Jersey (December):		
Burlington County	3	
North Carolina (December):		
Bertie County	5	
Cabarrus County	5	
Durham County	6	
Forsyth County	13	
Gaston County	2	
Guilford County	37	
Halifax County	1	
Mecklenburg County	2	
New Hanover County	1	
Robeson County	4	
Rockingham County	5	
Rowan County	1	
Rutherford County	3	
Stanly County	1	
Wake County	11	
Total	97	
North Dakota (December):		
Cass County	1	
Richland County	1	
Total	2	

SMALLPOX—Continued.

State Reports for October, November and December, 1918—Continued.

Place.	Cases.	Deaths.
Pennsylvania (December):		
Mercer County—		
Greenville	1	
Clearfield County	1	
Total	2	
South Carolina (December):		
Greenville	8	
Virginia (December):		
Alleghany County	25	
Covington	14	
Jordan Mines	3	
Carroll County	6	
Giles County—		
Newport	5	
Isle of Wight County	1	
King William County	3	
West Point County	1	
Norfolk County—		
Norfolk	10	
Ocean View	1	
Virginia (December)—Con.		
Pittsylvania County	10	
Rockingham County	9	
Sussex County	1	
Tazewell County—		
Pocahontas	4	
Wise County—		
Wise	5	
Wythe County	1	
Total	99	
Wyoming (December):		
Laramie County	3	
Carbon County	1	
Natrona County	4	
Uinta County	1	
Albany County	2	
Total	11	

City Reports for Week Ended Jan. 11, 1919.

Place.	Cases.	Deaths.
Adrian, Mich	12	
Akron, Ohio	3	
Altoona, Pa	1	
Asheville, N. C	1	
Atlanta, Ga	11	
Battle Creek, Mich	1	
Birmingham, Ala	1	
Bluefield, W. Va	1	
Brunswick, Ga	3	
Buffalo, N. Y	1	
Chicago, Ill	2	
Cincinnati, Ohio	3	
Cleveland, Ohio	12	
Colorado Springs, Colo	2	
Council Bluffs, Iowa	5	
Denver, Colo	7	
Des Moines, Iowa	3	
Detroit, Mich	5	
Durham, N. C	1	
Eau Claire, Wis	1	
Elgin, Ill	7	
Fairmont, W. Va	1	
Fort Dodge, Iowa	1	
Fort Worth, Tex	1	
Freeport, Ill	1	
Grand Rapids, Mich	2	
Greeley, Colo	2	
Hammond, Ind	2	
Houston, Tex	1	
Indianapolis, Ind	1	
Kalamazoo, Mich	3	
Kansas City, Mo	5	
Lincoln, Nebr	3	
Long Beach, Cal	2	
Los Angeles, Cal	2	
Madison, Wis	1	
Marinette, Wis	1	
Marshalltown, Iowa	3	
Milwaukee, Wis	1	
Minneapolis, Minn	6	
Nashville, Tenn	1	
New Orleans, La	1	
Norfolk, Va	3	
North Yakima, Wash	1	
Oakland, Cal	1	
Ogden, Utah	6	
Oklahoma City, Okla	7	
Omaha, Nebr	6	
Oshkosh, Wis	4	
Pekin, Ill	9	
Pittsburgh, Pa	1	
Portland, Oreg	4	
Roanoke, Va	2	
Rock Island, Ill	1	
St. Joseph, Mo	3	
Salt Lake City, Utah	1	
San Francisco, Cal	7	
Seattle, Wash	4	
Sharon, Pa	1	
Sioux City, Iowa	1	
Sioux Falls, S. Dak	2	
South Bend, Ind	1	
Spokane, Wash	1	
Superior, Wis	3	
Toledo, Ohio	4	
Wilkinsburg, Pa	1	
Winston-Salem, N. C	8	
Zanesville, Ohio	1	

SYPHILIS.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases.
Camp Bowie zone, Tex	1
Charleston sanitary district, S. C	1
Camp Doniphan zone, Okla	1
Camp Eberts zone, Ark	1
Fayetteville sanitary district, N. C	1
Camp Greene zone, N. C	5
Gulfport health district, Miss	1
Camp Humphreys zone, Va	1
Camp Jackson zone, S. C	6
Camp Joseph E. Johnston zone, Fla	16
Camp Lee zone, Va	2
Camp McClellan zone, Ala	3
Muscle Shoals sanitary district, Ala	8
Fort Oglethorpe zone, Ga. and Tenn	9
Picric Acid Plant zone, Ga	7
Camp Pike zone, Ark	5
Portsmouth and Norfolk County health district, Va	1
Camp Sheridan zone, Ala	5
Camp Sherman zone, Ohio	2
Camp Zachary Taylor zone, Ky. and Ind	34
Tidewater health district, Va	3
Camp Travis zone, Tex	5

TETANUS.

City Reports for Week Ended Jan. 11, 1919.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio	1		Memphis, Tenn	1	
Birmingham, Ala		1	Portsmouth, Va		1
Kansas City, Mo		1			

TUBERCULOSIS.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases.
Camp Bowie zone, Tex	3
Charleston sanitary district, S. C	2
Camp Devens zone, Mass	2
Camp Dix zone, N. J	2
Gas and Flame School zone, Ga. and Ala	3
Camp Greene zone, N. C	1
Gulfport health district, Miss	2
Camp Jackson zone, S. C	1
Camp Joseph E. Johnston zone, Fla	5
Camp MacArthur zone, Tex	1
Camp McClellan zone, Ala	1
Camp Merritt zone, N. J	2
Portsmouth and Norfolk County health district, Va	3
Camp Zachary Taylor zone, Ky. and Ind	10
Camp Travis zone, Tex	4
Vancouver zone, Wash	1
Wilmington sanitary district, N. C	1

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 214.

TYPHOID FEVER.

Cases Reported in Extra-Cantonment Zones, Week Ended Jan. 25, 1919.

	Cases
Camp Bowie zone, Tex	1
Charleston sanitary district, S. C	1
Camp Joseph E. Johnston zone, Fla	1
Camp Lee zone, Va	1
Muscle Shoals sanitary district, Ala	1
Camp Polk zone, N. C	3
Camp Travis zone, Tex	1
Wilmington sanitary district, N. C	2

TYPHOID FEVER—Continued.

State Reports for October, November, and December, 1918.

Place.	New cases reported.
California (October):	
Alameda County—	
Alameda	3
Berkeley	1
Oakland	15
Butte County—	
Chico	4
Contra Costa County	1
Martinez	3
Fresno County	2
Clovis	3
Imperial County	2
El Centro	8
Kern County	1
Taft	1
Kings County	1
Lassen County	1
Los Angeles County	1
Glendale	1
Los Angeles	12
Long Beach	2
Orange County—	
Anaheim	1
Riverside County	1
Perris	1
Riverside	3
Sacramento County—	
Sacramento	4
San Benito County	1
San Bernardino County	2
San Diego County—	
Escondido	1
San Diego	3
San Francisco	7
San Joaquin County	2
Stockton	4
Santa Barbara County—	
Santa Barbara	3
Santa Maria	1
Santa Cruz County—	
Santa Cruz	2
Siskiyou County—	
Dunsmuir	1
Sonoma County	1
Stanislaus County—	
Oakdale	1
Tulare County	1
Ventura County—	
Santa Paula	1
Total	103
Illinois (December):	
Adams County—	
Quincy	3
Cook County—	
Chicago	13
Jackson County—	
De Soto Township	2
Lake County—	
North Chicago	1
Madison County—	
Alton	1
Edwardsville	1
Morgan County—	
Jacksonville	1
Randolph County—	
Sparta	1
Rock Island County—	
Moline	2
Rock Island	4
St. Clair County—	
Belleville	1
Will County—	
Joliet	1
Total	31

Place.	New cases reported.
Kansas (December):	
Bourbon County—	
Mapleton (R. D.)	1
Butler County—	
Augusta	1
El Dorado (2 R. D.)	5
Leon (R. D.)	1
Midian	2
Cherokee County—	
Baxter Springs	1
Coffey County—	
Burlington	1
Douglas County—	
Lawrence	2
Linn County—	
Pleasanton	2
Logan County—	
Russell Springs	1
Marshall County—	
Irving	1
Montgomery County—	
Independence	2
Sedgwick County—	
Wichita	3
Wabaunsee County—	
Eskridge (R. D.)	2
Wyandotte County—	
Kansas City	2
Total	27
Louisiana (December):	
Ascension Parish	1
Avoyelles Parish	2
Caddo Parish	4
Calcasieu Parish	2
Iberia Parish	1
Iberville Parish	5
Jackson Parish	3
Jefferson Parish	1
Jefferson Davis Parish	1
Lafourche Parish	1
Madison Parish	3
Orleans Parish	6
Ouachita Parish	1
Rapides Parish	2
Red River Parish	1
Richland Parish	1
St. John Parish	1
St. Landry Parish	4
St. Tammany Parish	2
Tangipahoa Parish	2
Terrebonne Parish	1
Vermilion Parish	1
Vernon Parish	3
Total	49
Maryland (December):	
Baltimore City	15
Allegany County—	
Westernport	2
Luke	1
Anne Arundel County—	
Jacobs Hill	1
Millersville	2
Brooklyn	3
Baltimore County—	
Parkton	2
Highlandtown	1
Essex	1
Violetville	1
Catonsville	1
Halethorpe, R. D.	1
Woodlawn	1
Stevenson	6
Rossville	1

TYPHOID FEVER—Continued.

State Reports for October, November, and December, 1918—Continued.

Place.	New cases reported.
Maryland (December)—Continued.	
Caroline County—	
Hillsboro, R. D.	1
Hollandsville, R. D.	1
Ridgely, R. D.	1
Cecil County—	
Providence	1
Charles County—	
Indianhead	2
Pomfret	2
Marbury	4
Rison	1
Mason Springs	1
Dorchester County—	
Wingate	1
Andrews	1
Bishops Head	1
Cambridge	4
Toddville	3
Airey	1
Hurlock	1
Frederick County—	
Knoxville	1
Brunswick, R. D.	1
Harford County—	
Havre de Grace	3
Kent County—	
Chestertown	1
Montgomery County—	
Fairland	1
Cloppers	1
Prince Georges County—	
Branchville	3
Queen Annes County—	
Centerville	1
Centerville, R. D.	1
Chester	1
Somerset County—	
Hopewell, R. D.	1
Hopewell	1
Doughertytown	1
Crisfield	1
Crisfield, R. D.	1
Talbot County—	
Chapel	1
Washington County—	
Bakersville	1
Millstone	1
Sharpsburg	1
Hancock	1
Hagerstown	1
Antietam	1
Wicomico County—	
Parsonsburg, R. D.	1
Bivalve	1
Nanticoke	1
Worcester County—	
Snow Hill	1
Total	95
Massachusetts (December):	
Bristol County—	
Fall River	6
New Bedford	1
Essex County—	
Beverly	1
Gloucester	1
Lawrence	3
Lynn	1
Lynnfield (town)	1
Methuen	1
Peabody	3
Rockport (town)	1
Rowley (town)	4
Hampshire County—	
Holyoke	1

Place.	New cases reported.
Massachusetts (December)—Continued.	
Middlesex County—	
Cambridge	2
Everett	2
Natick (town)	1
Newton	1
Norfolk County—	
Cohasset (town)	1
Walpole (town)	2
Plymouth County—	
Brockton	1
Bingham (town)	1
Suffolk County—	
Boston	6
Chelsea	1
Worcester County—	
Athol (town)	1
Blackstone (town)	1
Total	41
Michigan (December):	
Bay County—	
Bay City	1
Berrien County—	
Watervleit	1
Chippewa County—	
Sault Ste. Marie	1
Eaton County—	
Grand Ledge	1
Genesee County—	
Flint	1
Hillsdale County—	
Jefferson Township	1
Houghton County—	
Laird Township	1
Ingham County—	
Onondaga Township	1
Kalamazoo County—	
Kalamazoo	1
Kent County—	
Grand Rapids	2
Wyoming Township	1
Lapeer County—	
Lapeer	1
Lenawee County—	
Fairfield Township	1
Tecumseh	4
Livingston County—	
Howell	1
Midland County—	
Ingersoll Township	5
Oakland County—	
Holly	1
Osceola County—	
Middle Branch Township	1
St. Clair County—	
Port Huron Township	1
Marine City	1
Wayne County—	
Detroit	5
Wyandotte	1
Total	34
Minnesota (December):	
Anoka County—	
Anoka	1
Bigstone County—	
Prior Township	1
Chippewa County—	
Montevideo	1
Hennepin County—	
Minneapolis	2
Minnetonka Township	1
Ramsey County—	
St. Paul	2

TYPHOID FEVER—Continued.

State Reports for October, November, and December, 1918—Continued.

Place.	New cases reported.
Minnesota (December)—Continued.	
Rice County—	
Faribault	2
St. Louis County—	
Hibbing	2
Stearns County—	
St. Cloud	2
Total	14
Nebraska (October):	
Adams County	1
Brown County	4
Cheyenne County	1
Custer County	1
Dixon County	2
Dodge County	1
Douglas County	3
Dundy County	1
Franklin County	1
Furnas County	5
Jefferson County	1
Knox County	2
Lancaster County	2
Lincoln County	1
Merrick County	1
Scotts Bluff County	3
Total	30
Nebraska (November):	
Colfax County	2
Knox County	5
Lancaster County	2
Platte County	1
Scotts Bluff County	1
Total	11
New Jersey (December):	
Atlantic County	1
Bergen County	6
Burlington County	4
Camden County	5
Cumberland County	3
Essex County	.
Hudson County	6
Mercer County	1
Middlesex County	1
Monmouth County	11
Union County	3
Total	43
North Carolina (December):	
Alexander County	1
Anson County	1
Beaufort County	1
Caldwell County	2
Carteret County	1
Catawba County	1
Chatham County	1
Chowan County	1
Cleveland County	1
Columbus County	2
Craven County	1
Duplin County	1
Durham County	3
Forsyth County	1
Gaston County	1
Gates County	2
Graham County	1
Guilford County	2
Iredell County	1
Jackson County	2
Johnston County	4
Mecklenburg County	2
Nash County	1

Place.	New cases reported.
North Carolina (December)—Continued.	
New Hanover County	10
Perquimans County	1
Person County	4
Pitt County	1
Randolph County	2
Robeson County	4
Rockingham County	9
Rutherford County	8
Sampson County	1
Scotland County	1
Wake County	2
Wayne County	1
Wilkes County	2
Wilson County	1
Total	81
Ohio (December):	
Adams County	12
Ashland County	1
Ashtabula County	1
Auglaize County	7
Belmont County	2
Butler County	2
Clinton County	2
Columbiana County	2
Crawford County	1
Cuyahoga County	7
Fairfield County	2
Gallia County	1
Guernsey County	2
Hamilton County	2
Hardin County	1
Harrison County	1
Henry County	2
Highland County	2
Lawrence County	3
Licking County	2
Logan County	1
Lorain County	1
Lucas County	2
Mahoning County	1
Meigs County	2
Mercer County	1
Miami County	2
Ross County	2
Sandusky County	1
Seneca County	1
Shelby County	1
Stark County	1
Summit County	4
Trumbull County	1
Tuscarawas County	1
Union County	5
Van Wert County	1
Warren County	1
Wood County	2
Total	86
Pennsylvania (December):	
Adams County	3
Allegheny County	20
Armstrong County	7
Bedford County	1
Berks County	2
Blair County	2
Bradford County	6
Butler County	14
Cambria County	1
Center County	1
Chester County	6
Clarion County	3
Crawford County	1
Cumberland County	4
Dauphin County	3
Delaware County	5

TYPHOID FEVER—Continued.

State Reports for October, November, and December, 1918—Continued.

Place.	New cases reported.
Pennsylvania (December)—Continued.	
Erie County	3
Fayette County	1
Franklin County	1
Fulton County	1
Huntingdon County	50
Jefferson County	4
Juniata County	1
Lancaster County	2
Lebanon County	1
Lehigh County	1
Luzerne County	1
Monroe County	2
Montgomery County	3
Montour County	2
Northumberland County	1
Perry County	1
Philadelphia County	13
Schuylkill County	4
Snyder County	2
Somerset County	2
York County	1
Total	176
Rhode Island (December):	
Providence	2
Smithfield (town)	1
Total	3
South Carolina (December):	
Abbeville County	2
Charleston County	1
Greenville County	6
Richland County	1
Spartanburg County	2
York County	5
Total	17
Vermont (December):	
Burlington	1
Virginia (December):	
Albemarle County—	
Scottsville	1

Place.	New cases reported.
Virginia (December)—Continued.	
Alleghany County—	
Jordan Mines	1
Appomattox County	1
Augusta County	1
Bedford County	1
Buckingham County	1
Caroline County	3
Carroll County—	
Laurel Fork	1
Floyd County	2
Fluvanna County	1
Hanover County	1
James City County—	
Williamsburg	2
King William County—	
West Point	1
Louisa County	1
Mineral	1
Mathews County	1
Montgomery County	4
Norfolk County	1
Northampton County	1
Orange County	4
Gordonsville	1
Pulaski County	1
Roanoke County—	
Vinton	1
Roanoke	1
Russell County	2
Scott County	2
Southampton County	4
Sussex County	1
Yale	3
Tazewell County—	
Flat Top	1
Washington County	5
Abingdon	1
Wise County—	
Glamorgan	1
St. Paul	2
Total	56
Wyoming (December):	
Uinta County	1

City Reports for Week Ended Jan. 11, 1919.

Place.	Cases.	Deaths.
Baltimore, Md.	3	1
Beaver Falls, Pa.	1	.....
Berkeley, Cal.	1	.....
Birmingham, Ala.	2	1
Boston, Mass.	1	1
Buffalo, N. Y.	2	1
Butler, Pa.	40	.....
Cairo, Ill.	1	.....
Chicago, Ill.	.....	2
Cleveland, Ohio	1	1
Coatesville, Pa.	1	.....
Colorado Springs, Colo.	.....	1
Columbus, Ohio	1	1
Detroit, Mich.	.....	1
Fairmont, W. Va.	1	.....
Flint, Mich.	1	.....
Framingham, Mass.	1	.....
Haverhill, Mass.	1	1
Houston, Tex.	1	1
Kalamazoo, Mich.	.....	1
Los Angeles, Cal.	3	1
Milwaukee, Wis.	1	.....
Montclair, N. J.	1	.....
New Bedford, Mass.	3	.....
New York, N. Y.	15	2
Philadelphia, Pa.	3	1
Piqua, Ohio	.....	1
Pittsburgh, Pa.	4	.....
St. Louis, Mo.	3	1
Salem, Oreg.	.....	1
San Antonio, Tex.	3	.....
Sault Ste. Marie, Mich.	.....	1
Seattle, Wash.	1	.....
Somerville, Mass.	1	.....
Spokane, Wash.	1	.....
Toledo, Ohio	1	.....
Trenton, N. J.	1	1
Utica, N. Y.	.....	1
Wilmington, Del.	2	2
York, Pa.	1	.....

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for October, November, and December, 1918.

State.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.
California (October)	388	495	192
Illinois (December)	695	173	207
Iowa (December)	76	.....	110
Kansas (December)	90	90	79
Louisiana (December)	29	146	21
Maryland (December)	162	174	113
Massachusetts (December)	584	346	393
Michigan (December)	709	63	349
Minnesota (December)	365	26	127
Nebraska (October)	80	16	33
Nebraska (November)	32	.....	25
New Jersey (December)	479	89	273
North Carolina (December)	129	38	65
North Dakota (December)	9	2	8
Ohio (December)	369	396	346
Pennsylvania (December	1,291	565	530
Rhode Island (December)	140	5	70
South Carolina (December)	94	38	4
Vermont (December)	3	3	1
Virginia (December)	129	219	38
Wyoming (December)	5	.....	1

City Reports for Week Ended Jan. 11, 1919.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Adams, Mass.	14,406	4	.....	.....	.....	.....	.....	.....	2	1
Adrian, Mich.	11,570	1	.....	.....	.....	.....	.....	.....	.....	.....
Akron, Ohio	93,604	47	2	.....	4	.....	1	.....	3	.....
Alameda, Cal.	28,433	33	.....	.....	.....	.....	.....	.....	.....	.....
Alexandria, La.	16,232	6	1	.....	1	.....	.....	.....	.....	.....
Allentown, Pa.	65,109	.....	5	.....	3	.....	4	.....	.....	.....
Alton, Ill.	23,783	14	2	1	.....	.....	.....	.....	.....	1
Altoona, Pa.	59,712	.....	10	.....	.....	.....	2	.....	.....	.....
Ann Arbor, Mich.	15,041	8	1	.....	.....	.....	2	.....	.....	.....
Appleton, Wis.	18,005	8	.....	.....	.....	.....	.....	.....	.....	.....
Arlington, Mass.	13,073	12	.....	.....	.....	.....	.....	.....	.....	.....
Asheville, N. C.	25,656	.....	.....	.....	1	.....	1	.....	15	.....
Ashtabula, Ohio	22,008	6	.....	.....	.....	.....	.....	.....	.....	.....
Atlanta, Ga.	196,144	98	5	1	1	.....	2	.....	1	5
Atlantic City, N. J.	59,515	19	.....	.....	.....	.....	.....	.....	2	1
Attleboro, Mass.	19,776	13	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	37,823	14	1	.....	.....	.....	1	.....	.....	.....
Austin, Tex.	35,612	11	.....	.....	.....	.....	.....	.....	.....	.....
Bakersfield, Cal.	17,543	.....	.....	.....	.....	.....	2	.....	.....	.....
Baltimore, Md.	594,637	279	20	3	14	.....	28	.....	35	28
Barre, Vt.	12,401	4	.....	.....	.....	.....	.....	.....	.....	.....
Battle Creek, Mich.	30,159	4	4	.....	1	.....	.....	.....	.....	.....
Bayonne, N. J.	72,204	.....	10	.....	1	.....	1	.....	1	.....
Beatrice, Nebr.	10,437	10	.....	.....	.....	.....	.....	.....	.....	1
Beaumont, Tex.	28,851	22	.....	.....	.....	.....	.....	.....	.....	1
Beaver Falls, Pa.	13,749	.....	3	.....	.....	.....	.....	.....	.....	.....
Bedford, Ind.	10,613	4	.....	.....	.....	.....	.....	.....	.....	1
Bellaire, Ohio.	14,575	4	1	.....	.....	.....	.....	.....	.....	.....
Belleville, N. J.	13,797	.....	1	.....	.....	.....	.....	.....	3	.....
Beloit, Wis.	18,547	2	.....	.....	1	.....	.....	.....	1	.....
Benton Harbor, Mich.	11,099	4	1	1	.....	.....	.....	.....	.....	.....
Berkeley, Cal.	60,427	42	1	.....	.....	.....	1	.....	1	5
Berlin, N. H.	13,892	9	.....	.....	1	.....	.....	.....	.....	1
Beverly, Mass.	22,128	16	1	.....	.....	.....	.....	.....	.....	.....
Biddeford, Me.	17,760	9	.....	.....	.....	.....	.....	.....	.....	3
Billings, Mont.	15,123	15	.....	.....	.....	.....	2	.....	5	.....
Binghamton, N. Y.	54,864	14	4	.....	.....	.....	1	.....	.....	.....
Birmingham, Ala.	199,716	85	3	.....	5	.....	1	.....	6	3

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended Jan. 11, 1919—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Bloomfield, N. J.	19,013	1	1							
Bluefield, W. Va.	16,123						2			
Boise, Idaho	35,951	22								
Boston, Mass.	767,813	478	67	4	11	1	37	1	67	26
Boulder, Colo.	12,012						3			
Braddock, Pa.	22,060		1				1			
Brazil, Ind.	10,472	2								
Bridgeport, Conn.	124,724	69	9		4				3	6
Bristol, Conn.	16,318	6		1					1	1
Brockton, Mass.	69,152	25							1	2
Brookline, Mass.	33,526	15	2	1	1				1	
Brunswick, Ga.	10,984	6			8					1
Buffalo, N. Y.	475,781	189	53	8	22	1	16	2	19	9
Burlington, Iowa	25,144	4								
Burlington, Vt.	21,802				2					
Butler, Pa.	28,617		1							
Butte, Mont.	44,057						1		13	
Cairo, Ill.	15,995	8								1
Cambridge, Mass.	114,293	48	5				4		5	1
Camden, N. J.	108,117		5		1		6		3	
Canton, Ohio	62,566	27			6		1			
Champaign, Ill.	15,052	6								1
Charleston, S. C.	61,041	45	4							2
Charleston, W. Va.	31,060	16	1				1			3
Charlotte, N. C.	40,759	19	1				2			1
Chelsea, Mass.	48,405	20			1					1
Chester, Pa.	41,857				2				3	
Chicago, Ill.	2,547,201	919	114	11	62	4	42	3	240	74
Chicopee, Mass.	29,950	7	5						1	1
Cincinnati, Ohio	414,248	135	12	1	2		3			14
Clarksburg, W. Va.	12,960		3	1						
Cleveland, Ohio	692,259	243	29	4	11	1	4		23	21
Clinton, Mass.	[1] 13,075	8								
Coatesville, Pa.	14,598				1					
Cohoes, N. Y.	25,292	2	1				1			
Colorado Springs, Colo.	38,965	20							2	3
Columbia, S. C.	35,165		3		3				1	
Columbus, Ohio	220,135	83	2		1		2		5	8
Concord, N. H.	22,858	11								
Corpus Christi, Tex.	10,789	2								
Council Bluffs, Iowa	31,838	11	5							
Covington, Ky.	59,623	16	2						1	1
Cranston, R. I.	26,773	11	2				1			
Cumberland, Md.	26,686	7	2		6		2		1	
Dallas, Tex.	124,738	61			1		2			4
Danville, Ill.	32,969	10								
Danville, Va.	20,183	7								
Dayton, Ohio	128,939	43	1		1		5		1	
Decatur, Ill.	41,483	22								1
Dedham, Mass.	10,618	3								
Denver, Colo.	268,439		3		2		6			15
Des Moines, Iowa	104,052		3	2			6			
Detroit, Mich.	619,648	330	72	12	4	1	43	1	33	20
Dubuque, Iowa	40,036		1	1			1			
Duluth, Minn.	97,077	26	12	3					3	1
Durham, N. C.	26,160	12	1						1	
East Chicago, Ind.	30,286	15		2						
East Cleveland, Ohio	13,864		2				1			
Easton, Pa.	30,854		3						6	
East Orange, N. J.	43,761	7			1		1			
Eau Claire, Wis.	18,870						2			
Elgin, Ill.	28,562	4								
Elizabeth, N. J.	88,830		4		2		8		6	6
Elmira, N. Y.	38,272	18	1		1		1	1		
Englewood, N. J.	12,603	4								
Erie, Pa.	76,592		4				2		12	
Escanaba, Mich.	15,854	12								
Eureka, Cal.	15,142	3								
Evanston, Ill.	29,304	8	2							
Everett, Mass.	40,100	16			1		1		2	

[1] Population Apr. 15, 1910.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended Jan. 11, 1919—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Everett, Wash	37,205						1			
Fall River, Mass	129,828		3		8		3		5	3
Fargo, N. Dak	17,872	3								
Findlay, Ohio	[1] 14,858	4	1							
Fitchburg, Mass	48,119	19	4	1	1		1		2	2
Flint, Mich	57,386	14	5				1			
Fond du Lac, Wis	21,486	9					1			
Fort Dodge, Iowa	21,039						1			
Fort Wayne, Ind	78,014	14	2	1						1
Fort Worth, Tex	100,597	35							1	1
Fostoria, Ohio	10,959	4								
Framingham, Mass	14,1[illegible]	6					1		1	
Frederick, Md	11,725	8	1							
Freeport, Ill	19,8[illegible]4	10	2							1
Fresno, Cal	36,314	30							1	2
Galesburg, Ill	24,620	9			3		1			
Galveston, Tex	42,650	13							1	1
Geneva, N. Y	13,915	4			1					
Grand Rapids, Mich	132,861	28	2		1		3		1	3
Green Bay, Wis	30,017	20								
Greenfield, Mass	12,251	4	2				1			
Greensboro, N. C	20,171	5								1
Greensburgh, Pa	15,881						1			
Hackensack, N. J	17,412	10							1	
Hammond, Ind	27,016	12								
Harrisburg, Pa	73,276				1		4			
Hartford, Conn	112,831		2		23		12		3	1
Haverhill, Mass	49,180	24	3						5	
Henderson, Ky	12,312	6								
Highland Park, Mich	33,859	12	5				2		1	
High Point, N. C	13,439	3	1						2	1
Hoboken, N. J	78,324	24	4	1	3		2		2	1
Holland, Mich	12,459	4								
Holyoke, Mass	66,593	18			1		1		2	1
Houston, Tex	116,878	64								3
Hudson, N. Y	12,898	8								1
Hutchinson, Kans	21,461		1							
Independence, Mo	11,964	2	1				1			
Indianapolis, Ind	284,622	115	28	3	4		19		3	6
Ironwood, Mich	15,095	11					2			
Ithaca, N. Y	16,017	7					4		1	
Jamestown, N. Y	37,431	7	7		1					1
Janesville, Wis	14,411	10								1
Jersey City, N. J	312,557		38				10		8	
Johnstown, N. Y	10,678	3								
Johnstown, Pa	70,473		10				1			
Joplin, Mo	33,400	7	1						4	
Kalamazoo, Mich	50,408	21					1		4	1
Kankakee, Ill	14,270						1			
Kansas City, Kans	102,096		4		1				1	
Kansas City, Mo	305,816	115	4	1	1		4	1		6
Kearny, N. J	24,325	12					3		2	
Kenosha, Wis	32,833	10	1		1		1			
Knoxville, Tenn	59,112				2				1	1
Kokomo, Ind	21,929	11					2			1
Lackawanna, N. Y	16,219	13	1		28	2				
La Crosse, Wis	31,835	6					2			
La Fayette, Ind	21,481	8					1			1
Lakewood, Ohio	23,813	9	1							
Lancaster, Ohio	16,086						1			1
Lancaster, Pa	51,437		1		12					
Lawrence, Kans	13,477	2	1		1					
Lawrence, Mass	102,923	67					1		5	7
Leavenworth, Kans	19,363	3	2							
Lima, Ohio	37,145	13	2				3			
Lincoln, Nebr	46,957	12	2	1			3			
Lincoln, R. I	10,473				2					
Little Rock, Ark	58,716	11			1		3		5	1
Logansport, Ind	21,338	9			3		6			
Long Beach, Cal	29,163	15								1

[1] Population Apr. 15, 1910.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended Jan. 11, 1919—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Long Branch, N. J	15,733	6								
Lorain, Ohio	38,266		2		1		1			
Los Angeles, Cal	535,485	328	16	4	7		7		29	22
Louisville, Ky	240,808	76	7	2	2		2		5	9
Lowell, Mass	114,366	49	3		11		7		3	3
Lynchburg, Va	33,497	26		1						1
Lynn, Mass	104,534	34	4				3	1		4
Madison, Wis	31,315	19			7		2			
Mahanoy City, Pa	17,709		1							
Malden, Mass	52,243	30	3				2			
Manchester, Conn	15,859	4					2			
Manchester, N. H	79,607	27	3		1		2		4	
Manitowoc, Wis	13,931	9	1						1	1
Marinette, Wis	[1] 14,610	6			1					
Marion, Ind	19,923	6	3		4		7	1		
Marquette, Mich	12,555	3					3			
Mason City, Iowa	14,938	6								
Medford, Mass	26,681	21	2				1		1	2
Melrose, Mass	17,724	6								
Memphis, Tenn	151,877	78	2		10		2		18	8
Meriden, Conn	29,431		3				2		1	2
Methuen, Mass	14,320	8								
Middletown, N. Y	15,890								3	
Milford, Mass	14,280	10								
Milwaukee, Wis	445,008	130	10	3	1		18	2	29	6
Minneapolis, Minn	373,448	122	20	2			12	2	8	8
Mishawaka, Ind	17,053	3								
Missoula, Mont	19,075	17					4			1
Mobile, Ala	59,201	35	1							1
Monessen, Pa	23,070		3							
Montclair, N. J	27,087	4					2		2	1
Montgomery, Ala	44,039	25			1					1
Morgantown, W. Va	14,444	3							1	1
Morristown, N. J	13,410	12					1			1
Mount Vernon, Ill	10,043	13	1							1
Muskogee, Okla	47,173				1					
Nashua, N. H	27,541	6					6	1		
Nashville, Tenn	118,136	63	1		9		2		1	3
Newark, N. J	418,789	182	24		3		19		36	14
New Bedford, Mass	121,622	56	4	1			12	4		
New Britain, Conn	55,385	11	1	1	1		1			1
Newburgh, N. Y	29,893	19							1	1
Newburyport, Mass	15,291	3								
New Haven, Conn	152,275	72	8	2	3				11	5
New Orleans, La	377,010	290	6		1		1		28	31
New Philadelphia, Ohio	10,133		1							
Newport, Ky	32,133	9								
Newport, R. I	30,585	8					3			
Newton, Mass	44,345	23	3						2	1
New York, N. Y	5,737,492	2,092	278	25	21		103	1	238	161
Niagara Falls, N. Y	38,466	20	1						2	1
Norfolk, Va	91,148		4		8		1			
North Adams, Mass	[1] 22,019	6								1
Northampton, Mass	20,006	29								1
North Attleboro, Mass	11,248	4								1
North Braddock, Pa	15,684				1		1			
North Tonawanda, N. Y	14,060	4								
Norwich, Conn	21,923	1					1			
Norwood, Ohio	23,269	6	3							
Oakland, Cal	206,405	161	3	1			5		9	9
Oak Park, Ill	27,816	15	1				1		1	
Ogden, Utah	32,343	9	1				1			
Oil City, Pa	20,162		1							
Oklahoma City, Okla	97,588	34		1						3
Olean, N. Y	16,927	11								
Omaha, Nebr	177,777	52	4		1		3			5
Orange, Conn	14,393	10	4		2					1
Orange, N. J	33,636	17	3		1		1		4	1
Oshkosh, Wis	36,549	11								

[1] Population Apr. 15, 1910.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended Jan. 11, 1919—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Parkersburg, W. Va.	21,059	7	.....	.....	1	.....	.....	.....	1	1
Pasadena, Cal.	49,620	20	.....	.....	1	.....	.....	.....	.....	4
Passaic, N. J.	74,478	18	5	.....	.....	.....	1	.....	.....	3
Peekskill, N. Y.	19,034	1	.....	.....	.....	.....	.....	.....	.....	.....
Pekin, Ill.	10,973	21	1	.....	.....	.....	.....	.....	.....	.....
Perth Amboy, N. J.	42,646	7	2	1	.....	.....	.....	.....	.....	.....
Philadelphia, Pa.	1,735,514	697	64	7	15	2	49	.....	98	73
Piqua, Ohio	14,275	7	.....	.....	.....	.....	.....	.....	.....	.....
Pittsburgh, Pa.	586,196	.....	24	.....	4	.....	8	.....	7	.....
Pittsburg, Kans.	18,340	.....	.....	.....	1	.....	.....	.....	.....	.....
Pittsfield, Mass.	39,678	14	.....	.....	.....	.....	.....	.....	.....	4
Plainfield, N. J.	24,330	11	.....	.....	.....	.....	.....	.....	.....	.....
Plattsburg, N. Y.	13,111	8	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth, Mass.	14,001	3	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth, Pa.	19,439	.....	.....	.....	18	.....	.....	.....	1	.....
Pomona, Cal.	13,624	8	.....	.....	.....	.....	.....	.....	.....	1
Pontiac, Mich.	18,006	1	10	1	1	.....	.....	.....	.....	.....
Port Chester, N. Y.	16,727	2	.....	.....	.....	.....	.....	.....	1	1
Portland, Me.	64,720	29	3	.....	.....	.....	5	.....	.....	2
Portland, Oreg.	308,399	146	6	1	1	.....	2	.....	3	3
Portsmouth, Va.	40,693	.....	.....	.....	3	.....	.....	.....	.....	.....
Pottsville, Pa.	22,717	.....	9	.....	1	.....	.....	.....	.....	.....
Poughkeepsie, N. Y.	30,786	10	3	.....	.....	.....	.....	.....	3	.....
Providence, R. I.	259,895	133	20	3	.....	.....	13	.....	.....	10
Quincy, Ill.	36,832	12	.....	.....	.....	.....	1	.....	.....	.....
Quincy, Mass.	39,022	16	3	1	.....	.....	.....	.....	1	.....
Raleigh, N. C.	20,274	19	.....	.....	1	.....	.....	.....	1	2
Reading, Pa.	111,607	.....	6	.....	50	.....	2	.....	1	.....
Redlands, Cal.	11,573	5	.....	.....	.....	.....	6	.....	.....	2
Richmond, Va.	158,702	82	3	1	4	.....	2	.....	29	5
Riverside, Cal.	20,496	.....	.....	.....	.....	.....	.....	.....	.....	1
Roanoke, Va.	46,282	16	2	.....	2	.....	.....	.....	.....	1
Rochester, N. Y.	264,714	89	21	.....	2	.....	14	.....	6	2
Rock Island, Ill.	29,452	8	.....	.....	.....	.....	.....	.....	.....	.....
Rocky Mount, N. C.	12,673	3	.....	.....	.....	.....	.....	.....	.....	.....
Rome, N. Y.	24,259	.....	.....	.....	.....	.....	.....	.....	3	.....
Rutland, Vt.	15,038	7	.....	.....	.....	.....	.....	.....	.....	.....
Sacramento, Cal.	68,984	49	5	.....	.....	.....	2	.....	.....	1
Saginaw, Mich.	56,469	30	.....	.....	3	.....	2	.....	.....	.....
St. Joseph, Mo.	86,498	39	6	1	.....	.....	1	.....	.....	2
St. Louis, Mo.	768,630	266	28	1	5	.....	8	1	28	17
Salem, Mass.	49,346	.....	3	.....	.....	.....	3	.....	1	3
Salt Lake City, Utah.	121,623	55	2	.....	1	.....	2	.....	11	3
San Angelo, Tex.	[1]10,321	8	.....	.....	.....	.....	.....	.....	.....	2
San Antonio, Tex.	128,215	6	11	.....	1	.....	.....	.....	12	6
San Bernardino, Cal.	17,616	12	.....	.....	.....	.....	.....	.....	.....	1
San Diego, Cal.	56,412	32	.....	.....	.....	.....	1	.....	3	4
Sandusky, Ohio.	20,226	6	.....	.....	.....	.....	.....	.....	1	.....
San Francisco, Cal.	471,023	465	3	.....	1	.....	5	1	26	29
Santa Barbara, Cal.	15,360	16	.....	.....	.....	.....	.....	.....	.....	.....
Santa Cruz, Cal.	15,150	6	.....	.....	.....	.....	.....	.....	.....	.....
Saratoga Springs, N. Y.	13,839	2	1	.....	.....	.....	.....	.....	2	1
Saugus, Mass.	10,210	.....	1	.....	.....	.....	.....	.....	.....	.....
Sault Ste. Marie, Mich.	14,130	4	1	1	.....	.....	.....	.....	.....	.....
Schenectady, N. Y.	103,774	26	2	.....	.....	.....	1	.....	2	3
Seattle, Wash.	366,445	.....	7	.....	3	.....	13	.....	.....	.....
Shamokin, Pa.	21,274	.....	10	.....	2	.....	1	.....	.....	.....
Sharon, Pa.	19,156	.....	.....	.....	.....	.....	1	.....	.....	.....
Shenandoah, Pa.	29,713	.....	.....	.....	.....	.....	.....	.....	3	.....
Sioux City, Iowa.	58,568	.....	4	.....	.....	.....	.....	.....	.....	.....
Sioux Falls, S. Dak.	16,887	11	.....	.....	.....	.....	.....	.....	.....	.....
Somerville, Mass.	88,618	54	5	.....	1	.....	7	1	3	5
South Bend, Ind.	70,967	17	.....	.....	23	.....	1	.....	.....	.....
Southbridge, Mass.	14,465	4	.....	.....	.....	.....	.....	.....	.....	.....
Spartanburg, S. C.	21,985	10	.....	.....	1	.....	.....	.....	.....	.....
Springfield, Ill.	62,623	32	3	1	.....	.....	2	.....	.....	.....
Springfield, Mass.	108,668	43	5	1	.....	.....	9	.....	.....	3
Springfield, Mo.	41,169	8	.....	.....	.....	.....	.....	.....	.....	3
Springfield, Ohio.	52,296	24	.....	.....	32	.....	.....	.....	2	1
Steelton, Pa.	15,750	.....	.....	.....	.....	.....	.....	.....	2	.....

[1] Population Apr. 15, 1910.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended Jan. 11, 1919—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Steubenville, Ohio	28,259	18	1	.....	.....	.....	2	.....	.....	.....
Stockton, Cal	36,209	41	.....	.....	1	.....	.....	.....	.....	2
Superior, Wis	47,167	11	.....	.....	.....	.....	1	.....	.....	1
Syracuse, N. Y	158,559	53	6	.....	1	.....	9	.....	4	3
Tacoma, Wash	117,446	.....	.....	.....	1	.....	8	.....	.....	.....
Taunton, Mass	36,610	21	.....	.....	19	.....	1	.....	2	3
Terre Haute, Ind	67,361	22	.....	.....	.....	.....	.....	.....	.....	3
Toledo, Ohio	202,010	77	6	1	.....	.....	4	1	16	8
Topeka, Kans	49,538	20	1	.....	1	.....	.....	.....	.....	.....
Trenton, N. J	113,974	58	2	.....	2	.....	.....	.....	3	4
Troy, N. Y	78,094	28	2	.....	.....	.....	3	.....	3	3
Urbana, Ill	10,146	3	.....	.....	.....	.....	.....	.....	.....	.....
Utica, N. Y	89,272	30	3	.....	.....	.....	1	.....	5	.....
Vallejo, Cal	13,803	13	1	1	.....	.....	.....	.....	.....	.....
Vancouver, Wash	13,805	.....	.....	.....	.....	.....	.....	.....	1	.....
Walla Walla, Wash	26,067	.....	.....	.....	1	.....	.....	.....	.....	.....
Waltham, Mass	31,011	12	.....	.....	1	.....	3	.....	.....	.....
Washington, D. C	369,282	239	24	1	3	.....	5	.....	16	17
Waterbury, Conn	89,201	.....	4	.....	.....	.....	3	.....	1	.....
Watertown, Mass	15,188	8	2	.....	.....	.....	.....	.....	1	1
Watertown, N. Y	30,404	6	.....	2	.....	.....	.....	.....	.....	1
Watervliet, N. Y	15,622	2	.....	.....	.....	.....	.....	.....	.....	1
Wausau, Wis	19,666	4	1	.....	2	.....	.....	.....	.....	1
Westfield, Mass	18,769	5	6	1	.....	.....	1	.....	1	.....
West Hoboken, N. J	44,386	10	1	.....	.....	.....	.....	.....	4	1
West New York, N. J	19,613	5	1	.....	.....	.....	.....	.....	1	.....
West Orange, N. J	13,964	2	5	.....	.....	.....	.....	.....	1	.....
Weymouth, Mass	14,041	8	.....	.....	.....	.....	.....	.....	.....	.....
Wheeling, W. Va	43,657	13	.....	.....	.....	.....	.....	.....	.....	1
White Plains, N. Y	23,331	10	.....	.....	.....	.....	2	.....	1	.....
Wichita, Kans	73,597	15	1	.....	.....	.....	.....	.....	.....	.....
Wilkes-Barre, Pa	78,334	.....	3	.....	.....	.....	.....	.....	1	.....
Williamsport, Pa	34,123	.....	1	.....	1	.....	1	.....	.....	.....
Wilmington, Del	95,369	55	2	2	.....	.....	2	.....	2	2
Wilmington, N. C	30,400	9	.....	.....	.....	.....	.....	.....	.....	.....
Winchester, Mass	10,812	7	.....	.....	.....	.....	.....	.....	.....	.....
Winona, Minn	[1] 18,583	7	.....	.....	.....	.....	.....	.....	1	.....
Winston-Salem, N. C	33,136	25	1	.....	.....	.....	1	.....	3	4
Winthrop, Mass	13,105	2	.....	.....	1	.....	1	.....	.....	1
Woburn, Mass	16,076	7	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y	103,066	30	5	.....	.....	.....	1	.....	.....	1
York, Pa	52,770	.....	1	.....	.....	.....	1	.....	.....	.....
Zanesville, Ohio	31,320	13	2	.....	.....	.....	1	.....	2	1

[1] Population Apr. 15, 1910.

FOREIGN.

BRAZIL.

Influenza—Sao Paulo.

From October 20 to November 17, 1918, influenza was reported present at Sao Paulo, Brazil, with an estimated weekly occurrence of about 2,000 fatalities.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	Dec. 11–20, 1918.		Dec. 21–31, 1918.		Remaining under treatment Dec. 31, 1918.
	New cases.	Deaths.	New cases.	Deaths.	
Diphtheria	5	1	1	.....	3
Leprosy	.....	.....	.....	.....	17
Malaria	6	.....	24	.....	[1] 41
Paratyphoid fever	.....	.....	1	.....	3
Scarlet fever	.....	.....	.....	.....	1
Typhoid fever	5	1	4	.....	[2] 44

[1] From the interior 38. [2] From the interior 18.

Influenza—Habana—Regla.

During the period from December 11 to 31, 1918, 339 cases of influenza with 60 fatalities, and 39 cases of bronchopneumonia with 24 fatalities, were notified at Habana.

At Regla, during the same period, 60 cases of influenza were notified.

SAMOA.

Influenza.

Influenza has been reported present in Samoa, with more than 8,000 fatalities occurring among natives in western Samoa. On January 24, 1919, the epidemic was stated to be possibly concluded.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

Reports Received During Week Ended Jan. 31, 1919.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Ceylon:				
Colombo	Nov. 17-30	4	5	
India:				
Calcutta	Nov. 3-16		48	
Madras	Nov. 3-23	87	70	
Rangoon	Oct. 13-26	2	2	
Java:				
West Java				Oct. 31-Nov. 6, 1918: Cases, 22; deaths, 11.
Batavia	Oct. 31-Nov. 6	21	11	
Philippine Islands:				
Manila	Dec. 1-7	7	4	
Provinces				Dec. 1-7, 1918: Cases, 174; deaths, 135.
Bataan	Dec. 1-7	12	11	
Batangas	do	16	12	
Bulacan	do	1		
Cavite	do	27	23	
Iloilo	do	19	14	
Laguna	do	2	1	
Oriental Negros	do	2	2	
Pampanga	do	1	1	
Pangasinan	do	74	58	
Tayabas	do	12	7	
Union	do	8	6	

PLAGUE.

Ceylon:				
Colombo	Oct. 27-Nov. 2	1	1	
India:				
Madras Presidency	Nov. 3-23	299	200	
Rangoon	Oct. 13-Nov. 2	14	14	

SMALLPOX.

Canada:				
Nova Scotia—				
Halifax	Jan. 5-11	15		
Sydney	do	1		
Ontario—				
Ottawa	Jan. 12-18	4		
Quebec—				
Montreal	do	9		
Canal Zone:				
Colon	Dec. 29-Jan. 4	1		
China:				
Chungking	Nov. 17-30			Present.
Nanking	Dec. 1-7			Do.
India:				
Calcutta	Nov. 3-9		1	
Madras	Nov. 3-23	17	17	
Rangoon	Oct. 20-26	1	1	
Java:				
West Java				Oct. 31-Nov. 6, 1918: Cases, 28; deaths, 21.
Batavia	Oct. 31-Nov. 6	18	18	
Mesopotamia:				
Bagdad	Oct. 19-Nov. 15	84	24	
Newfoundland:				
St. Johns	Jan. 4-10	1		
Outports—				
Avondale	do	3		
Bay of Islands	Jan. 11-17	6		
Musgrave Harbor	do	6		

TYPHUS FEVER.

Egypt:				
Alexandria	Nov. 27-Dec. 2	4	5	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 28, 1918, to Jan. 24, 1919.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay	Aug. 18–Nov. 9	26	15	
Calcutta	Sept. 29–Nov. 2		19	
Madras	Oct. 5–26	36	18	
Rangoon	Oct. 5–12	1	1	
Indo-China:				
Anam	Aug. 1–31	5	5	
Cambodia	do	98	71	
Cochin-China	do	110	89	
Saigon	Oct. 7–Nov. 10	18	12	
Tonkin	Aug. 1–31	1		
Java:				
East Java				Oct. 7–21, 1918: Cases, 109; deaths 94.
Surabaya (district)	Oct. 7–28	92	75	
Mid-Java				Sept. 25–Oct. 16, 1918: Cases, 1,389; deaths, 857.
Samarang	Sept. 25–Oct. 16	120	111	
West Java				Oct. 2–23, 1918: Cases, 190; deaths, 112.
Batavia	Oct. 2–23	140	84	
Mesopotamia:				
Bagdad	Oct. 11–18	8		
Philippine Islands:				
Manila	Nov. 3–9	28	16	
Do	Nov. 17–30	18	12	
Provinces				Nov. 2–9, 1918: Cases, 511; deaths, 417. Nov. 17–30, 1918: Cases, 404; deaths, 288.
Bataan	Nov. 17–30	19	14	
Batangas	Nov. 2–9	156	141	
Do	Nov. 17–30	43	31	
Bohol	Nov. 2–9	19	17	
Do	Nov. 17–30	10	4	
Bulacan	Oct. 27–Nov. 2	5	6	
Do	Nov. 17–30	6	5	
Cavite	Oct. 27–Nov. 2	38	28	
Do	Nov. 17–30	43	25	
Iloilo	Oct. 27–Nov. 2	9	6	
Do	Nov. 17–30	6	5	
Laguna	Oct. 27–Nov. 2	2	2	
Mindoro	Nov. 24–30	4	5	
Misamis	Oct. 27–Nov. 2	6	5	
Do	Nov. 17–23	18	5	
Oriental Negros	Nov. 2–9	20	8	
Do	Nov. 17–23	4	4	
Pampanga	Nov. 24–30	2	2	
Pangasinan	Nov. 2–9	236	192	
Do	Nov. 17–30	139	112	
Rizal	Oct. 27–Nov. 2	3	1	
Do	Nov. 24–30	16	5	
Sorsogon	Nov. 17–23	8	4	
Tayabas	Nov. 2–9	7	4	
Do	Nov. 17–30	16	9	
Union	Nov. 2–9	7	5	
Russia:				
Petrograd	To July 16	3,388	1,054	
Do	July 17–Aug. 21	2,943	1,455	In civil hospitals. In military hospitals, July 5–Aug. 21, 1918: Cases, 884; deaths, 783.

PLAGUE.

China:				
Amoy				Present.
Hongkong	Oct. 26–Nov. 2	1	1	
Do	Nov. 9–16	1	1	
Nanking	Nov. 2–9			Always prevalent.
Ecuador:				
Guayaquil	Nov. 1–30	5	3	
Egypt				Jan. 1–Nov. 21, 1918: Cases, 357; deaths, 153.

[1] From medical officers of the Public Health Service, American consuls, and other sources. For reports received from June 29 to Dec. 27, 1918, see Public Health Reports for Dec. 27, 1918. The tables of epidemic diseases are terminated semiannually and new tables begun.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 28, 1918, to Jan. 24, 1919—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India				Sept. 23–Nov. 9, 1918: Cases, 14,534; deaths, 11,488.
Bombay	Aug. 18–Nov. 9	34	23	
Karachi	Oct. 19–26	16	16	
Madras Presidency	Oct. 13–26	206	135	
Rangoon	Oct. 5–12	22	22	
Indo-China:				
Anam	Aug. 1–31	15	10	
Cambodia	do		23	
Cochin-China	do	14	11	
Saigon	Oct. 7–Nov. 3	3	1	
Java:				
East Java				Oct. 7–21, 1918: Cases, 17; deaths, 17.
Surabaya (district)	Oct. 7–21	15	15	
Mid-Java				Sept. 25–Oct. 16, 1918: Cases, 14; deaths, 14.
Samarang	Sept. 25–Oct. 16	6	6	
Siam:				
Bangkok	Sept. 21–28	4	3	
Do	Oct. 5–12	2	2	
Venezuela:				
Caracas	Dec. 30	1		

SMALLPOX.

Algeria:				
Algiers	Oct. 1–31	1		
Canada:				
New Brunswick—				
St. John	Nov. 8–14	3		
Campbellton	Dec. 22–28	1		
Nova Scotia—				
Bear River	Dec. 29–Jan 4			Present.
Digby	do			Do.
Halifax	Dec. 7–28	10		
Middleton	Dec. 29–Jan. 4			Do.
Quebec—				
Montreal	Nov. 24–Dec. 21	2		
Quebec	Dec. 15–21	1		
Do	Dec. 29–Jan. 4	1		
Canal Zone:				
Colon	Dec. 15–21	1		
China:				
Amoy	Oct. 13–Nov. 26			Do.
Canton	Nov. 17–23			Do.
Chungking	Nov. 10–16			Do.
Denmark:				
Copenhagen	Nov. 9–23	5		
India:				
Bombay	Aug. 18–Nov. 9	12	3	
Calcutta	Sept. 29–Nov. 2		5	
Karachi	Sept. 29–Oct. 5	1	1	
Madras	Oct. 5–26	12	8	
Indo-China:				
Anam	Aug. 1–31	29	8	
Cambodia	do	78	40	
Cochin-China	do	97	27	
Saigon	Oct. 7–20	13	3	
Tonkin	Aug. 1–31	5		
Japan:				
Kobe	Oct. 26–Dec. 7	70	14	
Java:				
East Java				Oct. 7–21, 1918; Cases, 6,
Surabaya (district)	Oct. 7–28	7		
Mid-Java				Sept. 25–Oct. 16, 1918: Cases, 55.
West Java				Oct. 2–23, 1918: Cases, 313; deaths,
Batavia	Oct. 2–23	73	58	101.
Mesopotamia:				
Bagdad	Oct. 11–18	11		
Mexico:				
Ciudad Juarez	Nov. 24–30	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from Dec. 28, 1918, to Jan. 24, 1919—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Newfoundland:				
St. Johns	Dec. 6–20	4		
Do	Dec. 28–Jan. 3	1		
Outports—				
Avondale	Dec. 28–Jan. 3	1		
Blaine Harbor	Dec. 14–20	2		
Bay Roberts	Dec. 21–27	1		
Bryants Cove	Dec. 7–13	3		
Burin	do	4		
Coleys Point	Dec. 14–20	1		
Musgrave Harbor	Dec. 7–13	4		
Paradise	do	60		Placentia Bay.
Philippine Islands:				
Manila	Nov. 2–9	2	2	
Portugal:				
Lisbon	Nov. 16–30	463		
Spain:				
Cadiz	Oct. 1–31		3	
Madrid	Sept. 1–Oct. 31		153	
Valencia	Nov. 10–Dec. 7	15	4	
Straits Settlements:				
Penang	Oct. 6–12	1		
Union of South Africa:				
Cape of Good Hope State—				
Cape Town	Aug. 1–30	1		

TYPHUS FEVER.

Algeria:				
Algiers	Nov. 1–30		1	
Brazil:				
Ceara	Sept. 14–21	1		
Colombia:				
Barranquilla	Nov. 8–Dec. 28		3	
Egypt:				
Alexandria	Oct. 14–Nov. 25	63	39	
Greece:				
Saloniki	Sept. 29–Oct. 19		19	
Japan:				
Nagasaki	Nov. 10–Dec. 1	4	2	
Java:				
East Java				Oct. 7–21, 1918: Cases, 5.
Surabaya	Oct. 7–21	4		
Mid-Java				Sept. 25–Oct. 16, 1918: Cases, 8.
West Java				Oct. 2–23: Cases, 31; deaths, 6.
Batavia	Oct. 2–23	15	4	
Siberia:				
Vladivostok	Sept. 1–Nov. 30	16		
Spain:				
Huelva	Oct. 1–31		2	
Union of South Africa:				
Port Elizabeth	Sept. 14–28			Present among natives in several interior towns.

YELLOW FEVER.

Brazil:				
Pernambuco	Oct. 1–15	1		
Ecuador:				
Babahoyo	Nov. 1–30	1		
Duran	Nov. 1–15	1	1	
Guayaquil	Nov. 1–30	77	42	
Milagro	Nov. 1–15	1		
Punta de Piedra	Nov. 1–30	1		
Salvador:				
San Salvador	Jan. 9	1		